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Worker Health and Safety Branch

Report

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A Study of Dislodgeable Foliar Residues of Methomyl, Phosmet and Propargite on
Grapes in Fresno, Kern and Madera Counties, 1990

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Abstract

WH&S investigators in 1988 and 1989 documented a seasonal effect for methomyl residue dissipation, with residues decaying more slowly following late-season applications compared to early-season applications (1, 2). In response to this phenomenon, WH&S amended the restricted entry interval (REI) for methomyl on grapes to 7 days when applied prior to August 15 and 21 days when applied to grapes after August 15 (3). This REI remains in effect today. The 1988 and 1989 investigations also prompted WH&S to reduce the calculated safe residue levels (SRL) for methomyl and propargite to reflect the increased hazard documented for workers performing hand cultivation and harvest tasks.

The current study was undertaken to further refine our understanding of residue dissipation in important grape pesticides, focusing on methomyl, carbaryl, naled, phosmet, and propargite dislodgeable foliar residue (DFR). Because it was a survey study, investigators faced considerable constraints in locating a sufficient number of sites to characterize parameters such as application rate and month. Carbaryl and naled data were not suitable for analysis. While propargite and phosmet data were suitable for overall regression analyses, they lacked adequate comparison data by month to investigate seasonal variation in dissipation. Methomyl was the only pesticide that provided adequate data for examining seasonal variation in dissipation. While it appears that methomyl residue dissipation varies, we did not observe an increased half-life for methomyl over the season. July and September dissipation rates were similar to the early season dissipation noted in prior studies, while August rates were significantly slower and fell between those observed for the early vs. late season.

Predicted time to reach the SRL for methomyl ($0.1 \mu\text{g}/\text{cm}^2$) ranged from 5 days (September) to 8 days (August) post-application, with the worst case estimate approximately twice as long, at 14 days post-application. For propargite, the difference in estimates is similar, with the SRL ($0.2 \mu\text{g}/\text{cm}^2$) predicted to be achieved at 19 days post-application, while the worst case estimate is not reached by 35 days post-application.

Introduction

This investigation continues activities conducted by the California Department of Pesticide Regulation (DPR), Worker Health and Safety Branch (WH&S), to characterize foliar residue dissipation in important grape pesticides, some of which have historically been involved in fieldworker illness episodes. In 1988, two episodes of suspected pesticide-related illness prompted a re-assessment of methomyl dissipation on grape foliage (1). Prior to 1988, the restricted entry interval (REI) for methomyl was two days for all crops and the calculated safe residue level (SRL) for methomyl foliar residues was estimated to be $1.5 \mu\text{g}/\text{cm}^2$. Sampling conducted in 1988 found that methomyl exhibited a seasonal variation in dissipation, with slower dissipation observed following later-season applications compared to early-season applications. While the interactions of a variety of factors related to plant attributes, environmental conditions, cultural practices and pollution have been hypothesized to impact methomyl dissipation, this study was the first to identify that a single factor, season, appears to affect methomyl residue dissipation (1). These findings were incorporated into a regulation that established an REI for methomyl of seven days post-application prior to July 1, and 21 days post-application after July 1. An associated cholinesterase monitoring study indicated that a hazard existed at foliar levels

of 1.5 $\mu\text{g}/\text{cm}^2$ methomyl and the calculated SRL for methomyl foliar residues was lowered to 0.1 $\mu\text{g}/\text{cm}^2$ (2, 3).

Follow-up investigation between June and November 1989 substantiated that methomyl residues exhibit slower dissipation following progressively later seasonal applications, but found that the effect was not observed until late in August (1). Thus, the regulations were amended to set an REI of seven days for methomyl when applied to grapes before August 15, and 21 days following methomyl applications made to grapes after August 15 (3). Reentry can take place after ten days if methomyl foliar residues are no greater than the SRL of 0.1 $\mu\text{g}/\text{cm}^2$ (3). While the interactions of a variety of factors related to plant attributes, environmental conditions, cultural practices and pollution have been hypothesized to impact methomyl dissipation, this study was the first to identify that a single factor, season, appears to affect methomyl residue dissipation (1).

In an illness episode in 1988, 46 of 57 nectarine harvesters in three crews developed contact dermatitis that was highly correlated with dermal exposures to propargite (4). These workers were exposed to DFR with median propargite residues of 0.61 – 0.69 $\mu\text{g}/\text{cm}^2$. A fourth harvester crew, working in the same area at the same time, was exposed to median propargite DFR of 0.15 $\mu\text{g}/\text{cm}^2$ and did not develop rashes. In comparing the DFR in the orchards where the outbreak occurred to the DFR in fields harvested by the unaffected crew, WH&S estimated an SRL of 0.2 $\mu\text{g}/\text{cm}^2$ for repeated dermal exposure to propargite foliar residues.

In this study, foliage from 27 grape vineyards was sampled in Fresno, Madera and Kern counties during July through September, following applications of methomyl, carbaryl, naled, phosmet and propargite. Residue data were evaluated for overall estimates of dissipation and, where feasible, to characterize the effect of application month on residue dissipation rate. Predicted residue half-lives and the time to reach established SRLs are also reported.

Materials and Methods

Field Procedures - WH&S staff, in cooperation with several grape growers in California's Central Valley, collected over 1200 dislodgeable foliar residue (DFR) samples at 27 study sites during July to September 1990. Study sites within Fresno, Kern and Madera counties were selected based on whether the vineyards were treated with pesticides of interest (target pesticides).

Sampling intervals varied by site and ranged from pre-application to 40 days post-application. Staff typically sampled sites two or three times in the first week post-application and at approximately weekly intervals thereafter. The number of sampling intervals per site varied from three to eight. Application date was known for all fields. For sites where foliar residues were monitored following a repeat application of the target pesticide(s), the dates of prior or initial seasonal applications were not known. Application rates for the target pesticides are listed in Table 1.

At each study site, the vineyard rows were numbered and the outermost five rows (buffer rows) excluded from sampling. At each sampling interval, five grape foliage samples containing 40

discs each were collected using a 1-inch diameter leaf punch fitted to a 4-ounce glass jar (5). Each sample thus had a total surface area of approximately 400 cm². One 40-disc foliage sample was taken from each of five randomly selected rows in the vineyard, with one leaf disc collected from each of 40 unharvested vines within the row. The jars were sealed, capped, and shipped on ice for extraction within 24 hours by the California Department of Food and Agriculture (CDFA), Center for Analytical Chemistry (lab). Table 1, Study Site and Application Information, describes the sites and application parameters. All August methomyl applications were made prior to the 15th, while the 7-day reentry interval was in effect. Phosmet was applied only in July, as the registrant withdrew the product's registration for use on grapes after this time. Propargite applications took place in July and September.

Table 1. 1990 Grape DFR Study Site and Application Information

Month	County	No. of Study Sites	Pesticide	App. Rates (lb ai/ac) ^a	No. of Applications ^b by site, pesticide and app. rate
July	Fresno	5	methomyl	0.90	5
			propargite	1.80	2
				2.40	3
	Madera	5	carbaryl	unknown	2
			naled	unknown	2
			methomyl	0.90	1
			phosmet	unknown	2
			propargite	unknown	4
				1.80	1
August	Fresno	5	methomyl	0.90	5
September	Kern	10	naled	1.00	2
			methomyl	0.45	2
				0.90	2
			propargite	0.90	2
				1.80	2
				2.70	2

b Pounds active ingredient (ai) per acre (ac)

a Number of applications exceed number of study sites when two or more pesticides were applied in a single tank mix. These applications share a study site ID but residues were evaluated individually by pesticide

Laboratory Procedures – Samples were processed and analyzed in accordance with standard lab procedures. Pesticide residue dislodging was accomplished by adding approximately 50 mL of a 0.5% sodium dioctyl sulfosuccinate solution, in water, to each sample jar. The jars were then rotated for 20 minutes and the solution decanted. The dislodging was repeated twice more, with rotation periods of 20 minutes and 10 minutes, respectively, resulting in a total decanted volume of approximately 150 mL for each sample. The solution was dried with anhydrous sodium hydroxide and the extract injected into a gas chromatograph and/or liquid chromatograph, as appropriate for each pesticide being analyzed. Samples were analyzed for the pesticide product's

active ingredient, with the exception of naled samples, which were analyzed for dichlorvos, the primary breakdown product of naled. Pesticide residues were reported as $\mu\text{g}/\text{sample}$. When multiple pesticide residues were associated with a single study site, each pesticide was evaluated separately. Minimum detection levels (MDL) were reported for samples with no detectable residues. Leaf discs were returned to study staff for verification of leaf sampling area.

Data Treatment and Analysis (Ref. 6 - 10)

Data Treatment Raw data were entered into a Microsoft[®] Access 2000 database and in Microsoft[®] Excel 2000 spreadsheets (6, 7). Residue data analyses were restricted to sites with known application date(s), known sampling intervals, and sampling intervals with at least one positive residue detection. Pre-application residues were excluded since the focus of this study was to characterize residue dissipation. All naled data (156 samples) were excluded since they had no detectable residues. Carbaryl data (42 samples) were also excluded since they were confounded by apparent re-applications about which no information was known.

Lab residue data ($\mu\text{g}/\text{sample}$) were divided by known leaf sampling areas (cm^2). Sample residues reported as none detected (ND) were used if at least one sample per interval and analyte had a positive detection. For these samples, one-half the reported minimum detection limit (MDL) was used to calculate sample DFR. Where sample disc counts were missing, 400 cm^2 was used as the default sampling area. The final raw data set, consisting of 810 sample records, is presented in Table 1 of the Appendix.

Data Analyses DFR "day means" ($\mu\text{g}/\text{cm}^2$) were calculated for each sampling interval within study site. The final data set consisted of 186 day means distributed among four pesticide analytes: methomyl (n = 64), phosmet (n = 13), phosmet oxon (n = 13) and propargite (n = 96). For all analyses, all samples taken at a site on one day were averaged and the natural logarithm of the average used as the dependent variable (8). Phosmet oxon day means were examined only for descriptive statistics (6, 7). All tests of significance were conducted at the $\alpha = 0.05$ level.

Predicted Mean DFR, 95% Prediction Limits, and Biased and Unbiased Estimates

The predicted DFR for a specific time after application, calculated using a regression equation, represents the expected mean DFR of all application sites at that time. Site DFRs will have a distribution of values at any given time after application; the value predicted by the regression equation is the estimated mean of that distribution. Prediction limits for $\mu\text{g}/\text{cm}^2$ DFR were calculated by exponentiating the limits for \ln DFR. The 95% prediction limit is the value below which mean DFR of 95% of the sites would be expected to lie if the study were repeated.

When the variable is lognormally distributed, as DFR is thought to be, regression analysis is typically done on the logarithms of the dependent variable. In this case, the predicted value is a predicted mean \log DFR. The simple antilog of predicted mean \log DFR is a biased estimator of mean DFR, and its bias is known to be negative. That is, over many samples, the average value of [antilog(predicted mean \log DFR at Time X)] is less than the true mean DFR at Time X. For this reason, it is preferable to use an unbiased estimator, such as the Bradu-Mundlak unbiased estimator of the mean of a lognormal distribution (9, 10).

For phosmet and propargite, dissipation analyses used the log-quadratic regression model:

$$\ln \text{DFR} = \beta_0 + \beta_1 * (\text{Days}) + \beta_2 * (\text{Days})^2$$

This model was used to calculate predicted $\ln \text{DFR}$ for each day to 35 days post-application. Predicted $\ln \text{DFR}$ was back-transformed to predicted DFR in $\mu\text{g}/\text{cm}^2$ using the Bradu-Mundlak unbiased estimator of the mean of a lognormal distribution (9, 10).

For methomyl, regression models were fit to the data using SAS PROC REG (9) to estimate DFR deposition and dissipation and to test for differences between months. Initially, the full model was fit:

$$\ln \text{DFR} = \beta_0 + \beta_1 \text{Day} + \beta_2 \text{Day}^2 + \beta_3 M_1 + \beta_4 M_2 + \beta_5 \text{Day} * M_1 + \beta_6 \text{Day} * M_2 + \beta_7 \text{Day}^2 * M_1 + \beta_8 \text{Day}^2 * M_2.$$

The variable Day is the number of days after application. M_1 is a dummy variable for Month, with the value of 1 for July and 0 otherwise. M_2 is a dummy variable for Month, with the value of 1 for August and 0 otherwise. The interpretation of the model coefficients is the following:

β_0	intercept for September,
β_1 and β_2	linear and quadratic slope components of time for September,
β_3	difference between intercepts of July and September,
β_4	difference between intercepts of August and September,
β_5	difference between linear slopes of July and September,
β_6	difference between linear slopes of August and September,
β_7	difference between quadratic slopes of July and September,
β_8	difference between quadratic slopes of August and September.

The intercept terms reflect initial deposition while the linear and quadratic terms reflect dissipation rate. Effects were tested by adding each term to the model in a stepwise manner and testing whether the reduction in the error sum-of-squares was significant.

The next step was to fit the reduced model, i.e., the model including only those terms that were significant. Differences between July and August were tested as contrasts (linear combinations) of the parameters of the reduced regression model. In each case, H_0 : Contrast = 0 vs. H_A : Contrast $\neq 0$ was tested against the residual mean-squared-error of the reduced model. All of the July-August contrasts are shown below; only those involving significant parameters were actually tested.

Contrast	represents difference between
$\beta_3 - \beta_4$	intercepts of July and August
$\beta_5 - \beta_6$	linear slopes of July and August
$\beta_7 - \beta_8$	quadratic slopes for July and August

The reduced model was used to calculate predicted \ln DFR for each day to 24 days post-application. Predicted methomyl DFR in $\mu\text{g}/\text{cm}^2$ and prediction limits for $\mu\text{g}/\text{cm}^2$ DFR were calculated in the same manner as for phosmet and propargite DFR. Figures were developed using Microsoft® Excel 2000 (7).

Results

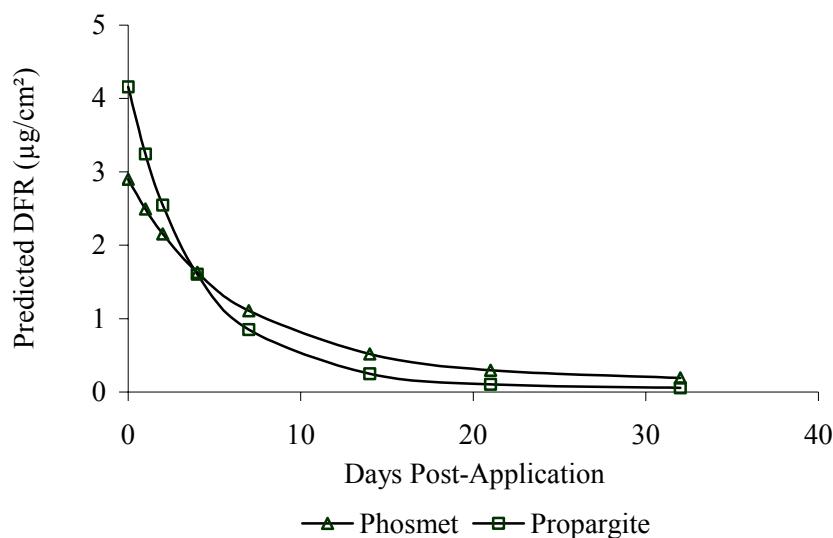
Log-Quadratic Regressions - Only methomyl data were suitable for investigating seasonal variation in dissipation rate. For phosmet and propargite, regression statistics for log-quadratic analyses of $\ln(\text{DFR day means})$ vs. days post-application (Days) are provided in Table 2. Figure 1 presents the same data graphically, plotting each pesticide's predicted dissipation over time.

Table 2. Regression Statistics for $\ln(\text{DFR Day Means})^{\text{a}}$ [$\ln(\mu\text{g}/\text{cm}^2)$] vs. Days Post-Application for Phosmet and Propargite Residues on Grape Foliage, 1990

Pesticide	No. of Day Means	R ²	β_0^{a} $\mu\text{g}/\text{cm}^2$	β_1^{a} $\ln(\mu\text{g}/\text{cm}^2)$	β_2^{a}	Significance F
Phosmet	13	0.97	2.90	-0.86	0.002	1.13E-08
Propargite	96	0.73	4.16	-0.77	0.004	5E-27

a $\ln \text{DFR} = \beta_0 + \beta_1 * (\text{Days}) + \beta_2 * (\text{Days})^2$, $\alpha = 0.05$

Figure 1. Dislodgeable Foliar Residue (DFR, $\mu\text{g}/\text{cm}^2$) vs. Days Post-Application or Phosmet and Propargite on Grape Foliage, 1990



For methomyl, in the full regression analysis, Day, Day² and the interactions of Day with M₁ and M₂ were significant, i.e., the coefficients β₀, β₁, β₂, β₅ and β₆ were significant. This indicates that there were no significant differences between July and September or between August and September in initial deposition, and that there were significant differences between these months in the linear, but not the quadratic components of dissipation. R² for the reduced model including only the five significant terms was 0.895, while for the full 8-parameter model it was 0.898. The parameter estimates for the reduced model are provided in Table 3. The linear contrast β₅ – β₆, representing the difference in slope between July and August, was significant.

Table 3. Parameter Estimates^a for the Reduced Model for DFR Day Means [$\ln(\mu\text{g}/\text{cm}^2)$] vs. Days Post-Application for Methomyl Residues on Grape Foliage, 1990

Variable	Parameter	Estimate
Intercept	β ₀	-0.08987
Day	β ₁	-0.59616
Day ²	β ₂	0.00987
Day*M ₁	β ₅	0.10263
Day*M ₂	β ₆	0.20820

a $\ln \text{DFR} = \beta_0 + \beta_1 \text{Day} + \beta_2 \text{Day}^2 + \beta_3 M_1 + \beta_4 M_2 + \beta_5 \text{Day} * M_1 + \beta_6 \text{Day} * M_2 + \beta_7 \text{Day}^2 * M_1 + \beta_8 \text{Day}^2 * M_2$
 $(\alpha = 0.05)$

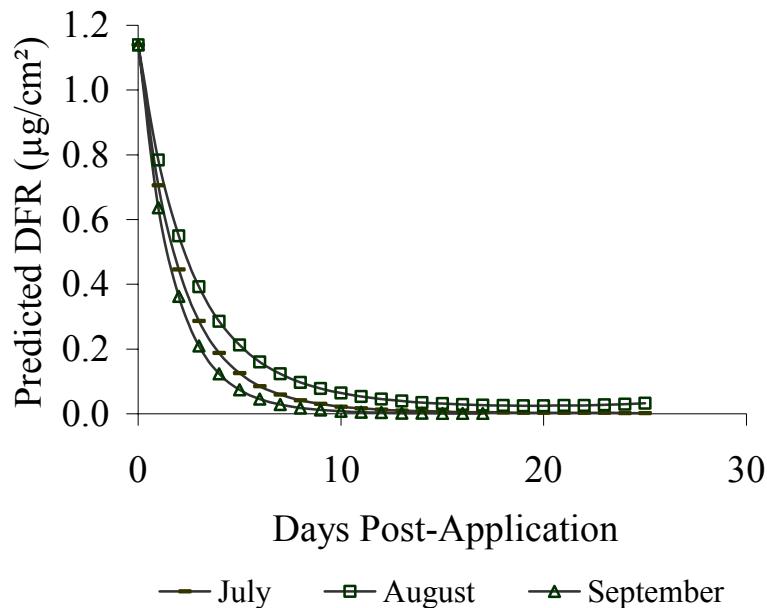
The regression equation for each month can be constructed from these parameter estimates, as seen in Table 4. Figure 2 presents methomyl DFR regression data graphically.

Table 4. Regression Equation^a Parameter Estimates by Month and County for Methomyl DFR [$\ln(\mu\text{g}/\text{cm}^2)$] on Grape Foliage vs. Days Post-Application, 1990

Month: County	Parameter Estimates		
	Intercept	Slope (linear)	Slope (quadratic)
July: Fresno, Madera	β ₀ = -0.0899	β ₁ + β ₅ = -0.4935	β ₂ = 0.0099
August: Fresno	β ₀ = -0.0899	β ₁ + β ₆ = -0.3880	β ₂ = 0.0099
September: Kern	β ₀ = -0.0899	β ₁ = -0.5962	β ₂ = 0.0099

a $\ln \text{DFR} = \beta_0 + \beta_1 \text{Day} + \beta_2 \text{Day}^2 + \beta_3 M_1 + \beta_4 M_2 + \beta_5 \text{Day} * M_1 + \beta_6 \text{Day} * M_2 + \beta_7 \text{Day}^2 * M_1 + \beta_8 \text{Day}^2 * M_2$
 $(\alpha = 0.05)$

Figure 2. Methomyl Grape Dislodgeable Foliar Residue (DFR, $\mu\text{g}/\text{cm}^2$) vs. Days Post-Application, 1990 (based on reduced model log-quadratic regression analyses)



Predicted DFR and 95% Prediction Limits - The unbiased predicted mean DFR and 95% prediction limits for overall residue dissipation for phosmet and propargite are shown in Table 5. For propargite, the calculated SRL is reached at 19 days ($0.2 \mu\text{g}/\text{cm}^2$). The model cannot be used to determine the SRL for the 95% limit because predicted residues begin to increase after 35 days, when DFR = $0.377 \mu\text{g}/\text{cm}^2$.

Days to reach successive residue half-lives can also be observed from Table 5. For propargite, residue half-lives one through five are attained on days 3, 7, 10, 14 and 20 post-application, respectively. For phosmet, five residue half-lives are not achieved by the quadratic regression model. Residue half-lives one through three are accomplished on days 5, 11 and 19 post-application, respectively.

Table 5. Unbiased Predicted Mean Dislodgeable Foliar Residue (DFR) and 95% Prediction Limit for Phosmet and Propargite Residue Dissipation on Grape Foliage vs. Day Post-Application, 1990^a

Day Post-App.	Predicted Mean DFR and 95% Prediction Limit ($\mu\text{g}/\text{cm}^2$)			
	Phosmet Dissipation		Propargite Dissipation	
	Mean	95% Limit	Mean	95% Limit
0	2.928	4.315	5.966	26.778
1	2.528	3.678	4.672	20.787
2	2.182	3.154	3.683	16.271
3	1.894	2.721	2.922 ^b	12.842
4	1.652	2.361	2.334	10.218
5	1.446 ^b	2.061	1.878	8.195
6	1.270	1.808	1.521	6.626
7	1.121	1.595	1.240 ^b	5.399
8	0.993	1.413	1.019	4.434
9	0.884	1.259	0.843	3.669
10	0.790	1.126	0.703 ^b	3.060
11	0.709 ^b	1.012	0.590	2.571
12	0.638	0.913	0.499	2.177
13	0.578	0.827	0.425	1.857
14	0.525	0.753	0.365 ^b	1.596
15	0.479	0.687	0.316	1.382
16	0.439	0.630	0.276	1.205
17	0.404	0.580	0.242	1.059
18	0.373	0.536	0.214	0.937
19	0.346 ^b	0.498	0.191 ^c	0.836
20	0.323	0.463	0.172 ^b	0.751
21	0.302	0.433	0.155	0.680
35	0.185	0.274	0.083	0.377

a Based on log-quadratic regression analyses of \ln (DFR) vs. days post-application

b Estimated successive residue half-lives

c Propargite safe residue level (SRL, 0.2 $\mu\text{g}/\text{cm}^2$)

Table 6 gives predicted mean DFR for methomyl and the 95% prediction limit, in $\mu\text{g}/\text{cm}^2$, by day post-application, for each month. Values have been corrected for the bias present in the simple exponent when exponentiating the predicted \ln DFR calculated from the regression equation. DFR is predicted to reach the SRL ($0.1 \mu\text{g}/\text{cm}^2$) on days 6, 8, and 5 post-application, respectively, during July, August and September. The 95% limit predicts the SRL will be reached on days 9, 14, and 7, respectively, during July, August and September.

Table 6. Unbiased Predicted Mean Dislodgeable Foliar Residue (DFR) and 95% Prediction Limit for Methomyl Residue Dissipation on Grape Foliage vs. Day Post-Application, 1990^a

Predicted Mean DFR and 95% Prediction Limit ($\mu\text{g}/\text{cm}^2$) for Methomyl Dissipation						
July			August		September	
Day	Mean	95% Limit	Mean	95% Limit	Mean	95% Limit
0	1.140	3.057	1.140	3.057	1.140	2.461
1	0.706	1.864	0.784	2.073	0.637	1.492
2	0.445 ^b	1.163	0.550 ^b	1.437	0.362 ^b	0.905
3	0.286	0.742	0.393	1.019	0.210 ^b	0.549 ^b
4	0.188 ^b	0.484 ^b	0.286	0.738	0.124 ^b	0.333
5	0.125 ^b	0.322	0.212 ^b	0.546 ^b	0.074 ^c	0.202 ^b
6	0.085 ^c	0.219 ^b	0.161	0.413	0.045 ^b	0.123 ^b
7	0.059 ^b	0.152	0.124 ^b	0.319	0.028 ^b	0.075 ^c
8	0.042	0.108 ^b	0.097 ^c	0.251 ^b	0.018	0.046 ^b
9	0.030 ^b	0.078 ^c	0.078	0.202	0.012	0.028 ^b
10	0.022	0.058 ^b	0.064 ^b	0.166	0.008	0.018
11	0.017	0.043	0.053	0.139 ^b	0.005	0.012
12	0.013	0.033 ^b	0.045	0.119	0.003	0.010
13	0.010	0.026	0.039	0.103	0.002	0.008
14	0.008	0.021	0.035 ^b	0.092 ^c	0.002	0.008
15	0.006	0.017	0.031	0.083	0.001	0.007
16	0.005	0.014	0.029	0.077	0.001	0.007
17	0.005	0.012	0.027	0.073	0.001	0.007
18	0.004	0.010	0.026	0.070 ^b		
19	0.003	0.009	0.025	0.069		
20	0.003	0.008	0.025	0.070		
21	0.003	0.007	0.025	0.071		
22	0.003	0.007	0.026	0.075		
23	0.003	0.007	0.027	0.080		
24	0.002	0.006	0.029	0.087		

a Based on log-quadratic regression analyses of \ln (DFR) vs. days post-application

b Successive residue half-lives

c Methomyl safe residue level (SRL, $0.1 \mu\text{g}/\text{cm}^2$)

Days to reach residue half-lives one through five are indicated in Table 6. For all months, the model predicts initial residue half-life will be reached by the second day post-application. Five half-lives will be accomplished between post-application day 7 (September) and 14 (August). The longest single half-life occurs in August (4 days). The 95% limit predicts initial residue half-life will be attained on days 4, 5, and 3, respectively, for the three months studied. Only four half-lives are reached during August by day 24 post-application.

Phosmet Oxon - Under the influence of oxygen and light, the thion portion (P=S) of many organophosphate (OP) residues are converted to the oxon (P=O) on the leaf surface. This occurs over a period of several days to two weeks post-application (11). The oxon is more toxic than the thion, but breaks down much more rapidly. Exposure to OP oxons has contributed to worker illness incidents in the past (12-16). In this study, phosmet oxon was detected at two study sites in Madera County, which were treated in July. The dates of previous applications of phosmet to these vineyards are unknown. Phosmet oxon DFR data are presented in Table 7. Phosmet oxon was detected at all post-application sampling intervals. A sharp decline in phosmet oxon DFR is noted for both sites at Day 28, with a sharp rise on Day 35, when the highest oxon residues for the study were measured. This unexpected observation cannot be attributed to a possible re-application of phosmet, since phosmet thion DFRs (see Appendix) remain low over this interval.

Table 7. Mean Phosmet Oxon DFR ($\mu\text{g}/\text{cm}^2$) at Days After Second Phosmet Application

Days	Site 1	Site 2
1	0.039	0.046
4	0.083	0.093
7	Not Sampled	0.107
14	Not Sampled	0.099
18	0.084	Not Sampled
21	0.066	0.099
28	0.028	0.033
35	0.082	0.137
Grand Mean		0.070 ± 0.032

Discussion

WH&S investigations in 1988 and 1989 documented a seasonal effect for methomyl residue dissipation, with residues decaying more slowly following later-season applications compared to early-season applications (1, 2). Investigation of methomyl residues in 42 vineyards over six months ($n = 160$ day means) found that residue half-life averaged 2 days in June and July and 4 – 5 days from mid-August through October (1). Based on these data, the REI for methomyl on grapes was established at 7 days prior to August 15, and 21 days thereafter, unless foliar residues after 10 days were shown to be no greater than $0.1 \mu\text{g}/\text{cm}^2$ (3). This REI has effectively protected workers in the ensuing 12 years, with no further mass episodes of fieldworker illness due to over-exposure to methomyl residues.

In this study, five pesticides were surveyed to investigate whether residues exhibited seasonal variation in decay rate, but incomplete comparison data limited such analyses to methomyl (64

DFR day means). While the methomyl data were adequate data for comparing dissipation by month applied, the "late season" data (post August 15) were limited, consisting of only 6 DFR day means for September.

Half-lives cannot be compared directly in the prior vs. the current study, because the earlier studies employed linear regression analysis (constant decay rate), while the quadratic model used in the current study predicted that the decay rate varied over time within each month. However, we did not observe an increased half-life for methomyl over the season. The initial half-life during all three months was 2 days, which was similar to the early season observations from 1989 (1). The longest single half-life, 4 days, was observed in August. Overall in this study, 5 half-lives were achieved by post-application day 9, 14, and 7, respectively, in July, August and September (Table 6). The earlier study predicted 5 half-lives would be accomplished by 10 days post-application in the early season and 20 - 25 days post-application in the late season. Thus, July and September dissipation rates are similar to the early season dissipation noted in prior studies, while August rates were significantly slower and fall between those observed earlier for the early vs. late season. It appears that methomyl residue dissipation varies, but this study was not designed to determine which factors, if any, among the many environmental and cultural variables, may affect methomyl dissipation. The data suggest that, from a practical standpoint, the variation is minimal.

The predicted DFR based on the 95% limit may be of greater importance in characterizing and regulating the potential hazard of a pesticide. While DFR is predicted to reach the SRL between days 5 – 8 post-application, (Table 6), the longest time to decay to the SRL using the 95% limit estimate is approximately twice as long, at 14 days post-application (August). For propargite (Table 5), the difference in estimates is similar, with the SRL predicted to be achieved at 19 days post-application, while the 95% limit estimate is not reached using the regression model.

This observation underscores the dilemmas of 1) ensuring worker safety in the milieu of changing environmental conditions and weather patterns, and 2) the delicate fusion of statistics and good judgment in making sound regulatory decisions. With continuing advances in toxicology and its applications to worker protection, it is appropriate to regulate pesticide use based on conservative estimates of exposure. Such estimates provide a greater margin of protection for workers in constantly varying climatic conditions.

Safe Reentry Levels (SRL) - In the current study, estimated time to reach the SRL for methomyl ($0.1 \mu\text{g}/\text{cm}^2$) ranged from 5 days (September) to 8 days (August) post-application, which approximates the current 7-day REI in effect through the first half of August. Using the August 95% limit as a worst case estimate, the SRL would be achieved by 14 days post-application. Thus, while the 21-day REI in effect after August 15 would be protective, the 7-day REI may not provide adequate protection under worst case conditions. Further investigation would be needed to determine whether such conditions exist in early August, which exhibited the slowest residue decay among the three months surveyed. Methomyl continues to be widely used on grapes with DPR's Pesticide Use Report (PUR) data showing approximately 13,500 pounds applied in 2001 in the three counties surveyed, of the total 24,200 pounds applied to grapes statewide (56% of statewide use on grapes) (17).

The 30-day REI for propargite on grapes is based on the time to achieve an SRL of 0.2 µg/cm², established following WH&S investigation of a dermatitis outbreak among a crew of stone fruit harvesters (4). In the current study, using the predicted estimate (19 days), propargite residues are anticipated to decay to safe levels well within the 30-day REI. However, the 95% limit estimate was not reached by day 35 post-application. PUR data show that propargite continues to be widely used in the three counties surveyed: In 2001, 79,500 pounds of the state total of 101,800 pounds were applied to grapes in Fresno, Kern, and Madera counties (78% of statewide use on grapes) (17).

Phosmet, phosmet oxon - 2001 PUR data for phosmet indicate that 4,200 pounds of the statewide total of 6,700 pounds of phosmet were applied to grapes in Fresno, Kern and Madera counties (63% of the statewide total) (17). Phosmet has not historically been related to a large number of illnesses (18). From 1995 – 2001, there were a total of 26 illnesses related to the agricultural use of phosmet. Six involved pesticide applicators, 9 involved field residue exposures, and eleven involved non-agricultural workers exposed incidentally to agricultural applications (19).

However, pesticide oxons have been implicated in several illnesses (12-16). All oxons are more toxic than the thion – for parathion, the oxon is estimated to be 30 times as toxic (20). The mean phosmet oxon DFR in this study was 0.07 µg/cm². Generally, to calculate total DFR, oxon residues are added to the thion residues after they are multiplied by a factor that is pesticide-specific and reflects oxon's greater toxicity. In the case of phosmet, neither an SRL nor an oxon toxicity factor has been established. In comparing acute toxicities, however, the oxon is approximately 2 – 3 times more toxic than the thion (rat oral LD₅₀ for thion = 113 – 160 mg/kg; rat oral LD₅₀ for oxon = 46 – 50 mg/kg) (20, 21, 22). While phosmet oxon has not been specifically implicated in illness episodes, this study underscores the need to evaluate the relative contribution of oxons to OP exposures.

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Appendix to HS-1810, A Study of Dislodgeable Foliar Residues (DFR) of Methomyl, Phosmet and Propargite on Grapes in Fresno, Kern and Madera Counties, 1990

Table 1. Raw Data for Study Samples (ai = active ingredient, MDL = Minimum Detection Limit, ND = Not Detected, U = Unknown)

WHS Sample #	Analyte	μg (MDL) ^{1,2}	# leaf discs	Days ²	Date Applied	County	lb/acre ai
9001-2JG4-002A	methomyl	304.1	40	2	8/11/1990	Fresno	0.9
9001-2JG4-002B	methomyl	158.2	40	2	8/11/1990	Fresno	0.9
9001-2JG4-002C	methomyl	340.0	40	2	8/11/1990	Fresno	0.9
9001-2JG4-002D	methomyl	132.3	40	2	8/11/1990	Fresno	0.9
9001-2JG4-002E	methomyl	334.6	40	2	8/11/1990	Fresno	0.9
9001-2JG4-006A	methomyl	50.1	40	6	8/11/1990	Fresno	0.9
9001-2JG4-006B	methomyl	30.6	40	6	8/11/1990	Fresno	0.9
9001-2JG4-006C	methomyl	77.3	39.5	6	8/11/1990	Fresno	0.9
9001-2JG4-006D	methomyl	55.4	40.5	6	8/11/1990	Fresno	0.9
9001-2JG4-006E	methomyl	49.5	40	6	8/11/1990	Fresno	0.9
9001-2JG4-011A	methomyl	2.9	40	11	8/11/1990	Fresno	0.9
9001-2JG4-011B	methomyl	16.3	40	11	8/11/1990	Fresno	0.9
9001-2JG4-011C	methomyl	2.6	40.5	11	8/11/1990	Fresno	0.9
9001-2JG4-011E	methomyl	3.6	40	11	8/11/1990	Fresno	0.9
9001-2JG5-001A	methomyl	715.3	40	2	8/11/1990	Fresno	0.9
9001-2JG5-001B	methomyl	646.2	40	2	8/11/1990	Fresno	0.9
9001-2JG5-001C	methomyl	472.2	40	2	8/11/1990	Fresno	0.9
9001-2JG5-001D	methomyl	403.0	40	2	8/11/1990	Fresno	0.9
9001-2JG5-001E	methomyl	721.2	39.5	2	8/11/1990	Fresno	0.9
9001-2JG5-004A	methomyl	106.2	40.5	5	8/11/1990	Fresno	0.9
9001-2JG5-004B	methomyl	84.2	39.5	5	8/11/1990	Fresno	0.9
9001-2JG5-004C	methomyl	72.9	40	5	8/11/1990	Fresno	0.9
9001-2JG5-004D	methomyl	45.2	40	5	8/11/1990	Fresno	0.9
9001-2JG5-004E	methomyl	98.3	40.5	5	8/11/1990	Fresno	0.9
9001-2JG5-011A	methomyl	9.8	40	11	8/11/1990	Fresno	0.9
9001-2JG5-011B	methomyl	8.6	40	11	8/11/1990	Fresno	0.9
9001-2JG5-011C	methomyl	8.4	40	11	8/11/1990	Fresno	0.9
9001-2JG5-011D	methomyl	7.2	40	11	8/11/1990	Fresno	0.9
9001-2JG5-011E	methomyl	6.3	40	11	8/11/1990	Fresno	0.9
9001-2JG5-18A	methomyl	10.8	40	18	8/11/1990	Fresno	0.9
9001-2JG5-18B	methomyl	2.70	40	18	8/11/1990	Fresno	0.9
9001-2JG5-18C	methomyl	5.30	40	18	8/11/1990	Fresno	0.9
9001-2JG5-18D	methomyl	2.00	40	18	8/11/1990	Fresno	0.9
9001-2JG5-18E	methomyl	2.35	40	18	8/11/1990	Fresno	0.9
9001-JG1-000A	methomyl	0.16	40	Pre-application	7/14/1990	Fresno	0.9
9001-JG1-000A	propargite	ND	40	Pre-application	7/14/1990	Fresno	2.4
9001-JG1-000B	methomyl	0.11	40	Pre-application	7/14/1990	Fresno	0.9

1 Where MDL is specified, $\frac{1}{2}$ MDL was used to calculate sample DFR

2 Samples excluded from analysis were Days = "Pre-Application" and when μg = "ND" for all samples, by analyte, within sampling interval (shaded rows).

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Table 1. Raw Data for Study Samples (ai = active ingredient, MDL = Minimum Detection Limit, ND = Not Detected, U = Unknown)

WHS Sample #	Analyte	μg (MDL) ^{1,2}	# leaf discs	Days ²	Date Applied	County	lb/acre ai
9001-JG1-000B	propargite	ND	40	Pre-application	7/14/1990	Fresno	2.4
9001-JG1-000C	methomyl	0.13	40	Pre-application	7/14/1990	Fresno	0.9
9001-JG1-000C	propargite	ND	40	Pre-application	7/14/1990	Fresno	2.4
9001-JG1-000D	methomyl	ND	40	Pre-application	7/14/1990	Fresno	0.9
9001-JG1-000D	propargite	ND	40	Pre-application	7/14/1990	Fresno	2.4
9001-JG1-000E	methomyl	2.07	40	Pre-application	7/14/1990	Fresno	0.9
9001-JG1-000E	propargite	ND	40	Pre-application	7/14/1990	Fresno	2.4
9001-JG1-004A	methomyl	649	40	2	7/14/1990	Fresno	0.9
9001-JG1-004A	propargite	1947	40	2	7/14/1990	Fresno	2.4
9001-JG1-004B	methomyl	784	40	2	7/14/1990	Fresno	0.9
9001-JG1-004B	propargite	2885	40	2	7/14/1990	Fresno	2.4
9001-JG1-004C	methomyl	732	40	2	7/14/1990	Fresno	0.9
9001-JG1-004C	propargite	2430	40	2	7/14/1990	Fresno	2.4
9001-JG1-004D	methomyl	788	40	2	7/14/1990	Fresno	0.9
9001-JG1-004D	propargite	2559	40	2	7/14/1990	Fresno	2.4
9001-JG1-004E	methomyl	806	40	2	7/14/1990	Fresno	0.9
9001-JG1-004E	propargite	1669	40	2	7/14/1990	Fresno	2.4
9001-JG1-005A	methomyl	62.7	40	5	7/14/1990	Fresno	0.9
9001-JG1-005A	propargite	1392	40	5	7/14/1990	Fresno	2.4
9001-JG1-005B	methomyl	35.8	40	5	7/14/1990	Fresno	0.9
9001-JG1-005B	propargite	1162	40	5	7/14/1990	Fresno	2.4
9001-JG1-005C	methomyl	35.5	40	5	7/14/1990	Fresno	0.9
9001-JG1-005C	propargite	883	40	5	7/14/1990	Fresno	2.4
9001-JG1-005D	methomyl	46.9	40	5	7/14/1990	Fresno	0.9
9001-JG1-005D	propargite	1380	40	5	7/14/1990	Fresno	2.4
9001-JG1-005E	methomyl	76.7	40	5	7/14/1990	Fresno	0.9
9001-JG1-005E	propargite	2082	40	5	7/14/1990	Fresno	2.4
9001-JG1-012A	methomyl	9.8	42	12	7/14/1990	Fresno	0.9
9001-JG1-012A	propargite	466	42	12	7/14/1990	Fresno	2.4
9001-JG1-012B	methomyl	4.18	40	12	7/14/1990	Fresno	0.9
9001-JG1-012B	propargite	206	40	12	7/14/1990	Fresno	2.4
9001-JG1-012C	methomyl	3.03	40	12	7/14/1990	Fresno	0.9
9001-JG1-012C	propargite	89.4	40	12	7/14/1990	Fresno	2.4
9001-JG1-012D	methomyl	2.77	40	12	7/14/1990	Fresno	0.9
9001-JG1-012D	propargite	129	40	12	7/14/1990	Fresno	2.4
9001-JG1-012E	methomyl	2.82	39	12	7/14/1990	Fresno	0.9

1 Where MDL is specified, $\frac{1}{2}$ MDL was used to calculate sample DFR

2 Samples excluded from analysis were Days = "Pre-Application" and when μg = "ND" for all samples, by analyte, within sampling interval (shaded rows).

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Table 1. Raw Data for Study Samples (ai = active ingredient, MDL = Minimum Detection Limit, ND = Not Detected, U = Unknown)

WHS Sample #	Analyte	μg (MDL) ^{1,2}	# leaf discs	Days ²	Date Applied	County	lb/acre ai
9001-JG1-012E	propargite	279	39	12	7/14/1990	Fresno	2.4
9001-JG1-019A	methomyl	0.51	40	19	7/14/1990	Fresno	0.9
9001-JG1-019A	propargite	187	40	19	7/14/1990	Fresno	2.4
9001-JG1-019B	methomyl	1.5	39	19	7/14/1990	Fresno	0.9
9001-JG1-019B	propargite	114	39	19	7/14/1990	Fresno	2.4
9001-JG1-019C	methomyl	3.91	39	19	7/14/1990	Fresno	0.9
9001-JG1-019C	propargite	93.8	39	19	7/14/1990	Fresno	2.4
9001-JG1-019D	methomyl	0.43	39	19	7/14/1990	Fresno	0.9
9001-JG1-019D	propargite	92.9	39	19	7/14/1990	Fresno	2.4
9001-JG1-019E	methomyl	1.8	40	19	7/14/1990	Fresno	0.9
9001-JG1-019E	propargite	137	40	19	7/14/1990	Fresno	2.4
9001-JG1-026A	methomyl	0.25	43	26	7/14/1990	Fresno	0.9
9001-JG1-026A	propargite	59.9	43	26	7/14/1990	Fresno	2.4
9001-JG1-026B	methomyl	0.13	40	26	7/14/1990	Fresno	0.9
9001-JG1-026B	propargite	36	40	26	7/14/1990	Fresno	2.4
9001-JG1-026C	methomyl	0.22	38	26	7/14/1990	Fresno	0.9
9001-JG1-026C	propargite	48.1	38	26	7/14/1990	Fresno	2.4
9001-JG1-026D	methomyl	0.21	39	26	7/14/1990	Fresno	0.9
9001-JG1-026D	propargite	28.3	39	26	7/14/1990	Fresno	2.4
9001-JG1-026E	methomyl	0.43	40	26	7/14/1990	Fresno	0.9
9001-JG1-026E	propargite	33.4	40	26	7/14/1990	Fresno	2.4
9001-JG1-033A	methomyl	1.9	40	33	7/14/1990	Fresno	0.9
9001-JG1-033A	propargite	20	40	33	7/14/1990	Fresno	2.4
9001-JG1-033B	methomyl	1.0	40	33	7/14/1990	Fresno	0.9
9001-JG1-033B	propargite	9.91	40	33	7/14/1990	Fresno	2.4
9001-JG1-033C	methomyl	0.4	40	33	7/14/1990	Fresno	0.9
9001-JG1-033C	propargite	6.34	40	33	7/14/1990	Fresno	2.4
9001-JG1-033E	methomyl	0.6	40	33	7/14/1990	Fresno	0.9
9001-JG1-033E	propargite	7.05	40	33	7/14/1990	Fresno	2.4
9001-JG10-000A	methomyl	1.0	40	Pre-application	8/14/1990	Fresno	0.9
9001-JG10-000B	methomyl	2.4	41	Pre-application	8/14/1990	Fresno	0.9
9001-JG10-000C	methomyl	2.9	40	Pre-application	8/14/1990	Fresno	0.9
9001-JG10-000D	methomyl	3.6	40	Pre-application	8/14/1990	Fresno	0.9
9001-JG10-000E	methomyl	1.1	40	Pre-application	8/14/1990	Fresno	0.9
9001-JG10-002A	methomyl	167.5	40	2	8/14/1990	Fresno	0.9
9001-JG10-002B	methomyl	240.0	39	2	8/14/1990	Fresno	0.9
9001-JG10-002C	methomyl	166.3	39	2	8/14/1990	Fresno	0.9
9001-JG10-002D	methomyl	162.6	40	2	8/14/1990	Fresno	0.9
9001-JG10-002E	methomyl	153.0	41	2	8/14/1990	Fresno	0.9
9001-JG10-009A	methomyl	11.8	40	8	8/14/1990	Fresno	0.9

1 Where MDL is specified, $\frac{1}{2}$ MDL was used to calculate sample DFR

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WHS Sample #	Analyte	μg (MDL) ^{1,2}	# leaf discs	Days ²	Date Applied	County	lb/acre ai
9001-JG10-009B	methomyl	24.9	40	8	8/14/1990	Fresno	0.9
9001-JG10-009C	methomyl	33.8	40	8	8/14/1990	Fresno	0.9
9001-JG10-009D	methomyl	38.2	40	8	8/14/1990	Fresno	0.9
9001-JG10-009E	methomyl	47.8	40	8	8/14/1990	Fresno	0.9
9001-JG10-16A	methomyl	13.9	40	15	8/14/1990	Fresno	0.9
9001-JG10-16B	methomyl	16.5	40	15	8/14/1990	Fresno	0.9
9001-JG10-16C	methomyl	12.9	40	15	8/14/1990	Fresno	0.9
9001-JG10-16D	methomyl	31.0	40	15	8/14/1990	Fresno	0.9
9001-JG10-16E	methomyl	11.8	40	15	8/14/1990	Fresno	0.9
9001-JG10-24A	methomyl	6.00	38	23	8/14/1990	Fresno	0.9
9001-JG10-24B	methomyl	4.48	40	23	8/14/1990	Fresno	0.9
9001-JG10-24C	methomyl	6.75	35	23	8/14/1990	Fresno	0.9
9001-JG10-24D	methomyl	11.2	41	23	8/14/1990	Fresno	0.9
9001-JG10-24E	methomyl	7.65	42	23	8/14/1990	Fresno	0.9
9001-JG11-000A	methomyl	1.0	40	Pre-application	8/14/1990	Fresno	0.9
9001-JG11-000B	methomyl	0.1	15	Pre-application	8/14/1990	Fresno	0.9
9001-JG11-000C	methomyl	0.8	40	Pre-application	8/14/1990	Fresno	0.9
9001-JG11-000D	methomyl	1.2	39	Pre-application	8/14/1990	Fresno	0.9
9001-JG11-000E	methomyl	0.3	40	Pre-application	8/14/1990	Fresno	0.9
9001-JG11-002A	methomyl	121.2	40	2	8/14/1990	Fresno	0.9
9001-JG11-002B	methomyl	107.4	40	2	8/14/1990	Fresno	0.9
9001-JG11-002C	methomyl	163.2	40	2	8/14/1990	Fresno	0.9
9001-JG11-002D	methomyl	150.2	39	2	8/14/1990	Fresno	0.9
9001-JG11-002E	methomyl	139.2	41	2	8/14/1990	Fresno	0.9
9001-JG11-009A	methomyl	25.4	40	8	8/14/1990	Fresno	0.9
9001-JG11-009B	methomyl	13.6	40	8	8/14/1990	Fresno	0.9
9001-JG11-009C	methomyl	23.2	40	8	8/14/1990	Fresno	0.9
9001-JG11-009D	methomyl	43.9	40	8	8/14/1990	Fresno	0.9
9001-JG11-009E	methomyl	30.1	40	8	8/14/1990	Fresno	0.9
9001-JG11-16A	methomyl	22.0	40	15	8/14/1990	Fresno	0.9
9001-JG11-16B	methomyl	6.35	40	15	8/14/1990	Fresno	0.9
9001-JG11-16C	methomyl	20.2	40	15	8/14/1990	Fresno	0.9
9001-JG11-16D	methomyl	11.2	40	15	8/14/1990	Fresno	0.9
9001-JG11-16E	methomyl	10.6	40	15	8/14/1990	Fresno	0.9
9001-JG11-24A	methomyl	7.55	40	23	8/14/1990	Fresno	0.9
9001-JG11-24B	methomyl	4.3	40	23	8/14/1990	Fresno	0.9
9001-JG11-24C	methomyl	12.7	41	23	8/14/1990	Fresno	0.9
9001-JG11-24D	methomyl	10.9	40	23	8/14/1990	Fresno	0.9

1 Where MDL is specified, $\frac{1}{2}$ MDL was used to calculate sample DFR

2 Samples excluded from analysis were Days = "Pre-Application" and when μg = "ND" for all samples, by analyte, within sampling interval (shaded rows).

Appendix to HS-1810, A Study of Dislodgeable Foliar Residues (DFR) of Methomyl, Phosmet and Propargite on Grapes in Fresno, Kern and Madera Counties, 1990

Table 1. Raw Data for Study Samples (ai = active ingredient, MDL = Minimum Detection Limit, ND = Not Detected, U = Unknown)

WHS Sample #	Analyte	μg (MDL) ^{1,2}	# leaf discs	Days ²	Date Applied	County	lb/acre ai
9001-JG11-24E	methomyl	6.65	40	23	8/14/1990	Fresno	0.9
9001-JG14-000A	propargite	ND	41	Pre-application	9/14/1990	Kern	0.9
9001-JG14-000B	propargite	ND	41	Pre-application	9/14/1990	Kern	0.9
9001-JG14-000C	propargite	ND	42	Pre-application	9/14/1990	Kern	0.9
9001-JG14-000D	propargite	ND	40	Pre-application	9/14/1990	Kern	0.9
9001-JG14-020A	propargite	69.0	40	20	9/14/1990	Kern	0.9
9001-JG14-020B	propargite	20.0	39	20	9/14/1990	Kern	0.9
9001-JG14-020C	propargite	ND (5)	40	20	9/14/1990	Kern	0.9
9001-JG14-020D	propargite	11.3	40	23	9/14/1990	Kern	0.9
9001-JG14-02A	propargite	616	39	3	9/14/1990	Kern	0.9
9001-JG14-02B	propargite	424	40	3	9/14/1990	Kern	0.9
9001-JG14-02C	propargite	234	40	3	9/14/1990	Kern	0.9
9001-JG14-02D	propargite	157	40	3	9/14/1990	Kern	0.9
9001-JG14-06A	propargite	367	39	6	9/14/1990	Kern	0.9
9001-JG14-06B	propargite	280	39	6	9/14/1990	Kern	0.9
9001-JG14-06C	propargite	138	40	6	9/14/1990	Kern	0.9
9001-JG14-06D	propargite	99.7	40	6	9/14/1990	Kern	0.9
9001-JG14-13A	propargite	80.9	40	13	9/14/1990	Kern	0.9
9001-JG14-13B	propargite	21.3	40	13	9/14/1990	Kern	0.9
9001-JG14-13C	propargite	45.8	40	13	9/14/1990	Kern	0.9
9001-JG14-13D	propargite	10.4	40	13	9/14/1990	Kern	0.9
9001-JG14-26A	propargite	56.0	40	26	9/14/1990	Kern	0.9
9001-JG14-26B	propargite	21.5	39	26	9/14/1990	Kern	0.9
9001-JG14-26C	propargite	ND (5)	40	26	9/14/1990	Kern	0.9
9001-JG14-26D	propargite	26.4	40	26	9/14/1990	Kern	0.9
9001-JG14-34A	propargite	27.2	40	34	9/14/1990	Kern	0.9
9001-JG14-34B	propargite	14.4	40	34	9/14/1990	Kern	0.9
9001-JG14-34C	propargite	23.6	40	34	9/14/1990	Kern	0.9
9001-JG14-34D	propargite	7.49	40	34	9/14/1990	Kern	0.9
9001-JG15-000A	propargite	ND	40	Pre-application	9/14/1990	Kern	1.8
9001-JG15-000B	propargite	ND	40	Pre-application	9/14/1990	Kern	1.8
9001-JG15-000C	propargite	ND	46	Pre-application	9/14/1990	Kern	1.8
9001-JG15-000D	propargite	ND	31	Pre-application	9/14/1990	Kern	1.8
9001-JG15-02A	propargite	151	10	3	9/14/1990	Kern	1.8
9001-JG15-02B	propargite	797	40	3	9/14/1990	Kern	1.8
9001-JG15-02C	propargite	296	41	3	9/14/1990	Kern	1.8
9001-JG15-02D	propargite	702	40	3	9/14/1990	Kern	1.8
9001-JG15-06A	propargite	439	40	6	9/14/1990	Kern	1.8
9001-JG15-06B	propargite	402	40	6	9/14/1990	Kern	1.8
9001-JG15-06C	propargite	263	40	6	9/14/1990	Kern	1.8

1 Where MDL is specified, $\frac{1}{2}$ MDL was used to calculate sample DFR

2 Samples excluded from analysis were Days = "Pre-Application" and when μg = "ND" for all samples, by analyte, within sampling interval (shaded rows).

Appendix to HS-1810, A Study of Dislodgeable Foliar Residues (DFR) of Methomyl, Phosmet and Propargite on Grapes in Fresno, Kern and Madera Counties, 1990

Table 1. Raw Data for Study Samples (ai = active ingredient, MDL = Minimum Detection Limit, ND = Not Detected, U = Unknown)

WHS Sample #	Analyte	μg (MDL) ^{1,2}	# leaf discs	Days ²	Date Applied	County	lb/acre ai
9001-JG15-06D	propargite	662	40	6	9/14/1990	Kern	1.8
9001-JG15-13A	propargite	133	42	13	9/14/1990	Kern	1.8
9001-JG15-13B	propargite	51.6	43	13	9/14/1990	Kern	1.8
9001-JG15-13C	propargite	56.5	40	13	9/14/1990	Kern	1.8
9001-JG15-13D	propargite	65.1	40	13	9/14/1990	Kern	1.8
9001-JG15-20A	propargite	38.7	41	20	9/14/1990	Kern	1.8
9001-JG15-20B	propargite	18.6	40	20	9/14/1990	Kern	1.8
9001-JG15-20C	propargite	26.1	40	20	9/14/1990	Kern	1.8
9001-JG15-20D	propargite	38.8	40	20	9/14/1990	Kern	1.8
9001-JG15-26A	propargite	28.9	40	26	9/14/1990	Kern	1.8
9001-JG15-26B	propargite	6.30	40	26	9/14/1990	Kern	1.8
9001-JG15-26C	propargite	11.4	40	26	9/14/1990	Kern	1.8
9001-JG15-26D	propargite	10.8	40	26	9/14/1990	Kern	1.8
9001-JG15-34A	propargite	53.4	40	34	9/14/1990	Kern	1.8
9001-JG15-34B	propargite	29.0	42	34	9/14/1990	Kern	1.8
9001-JG15-34C	propargite	35.9	42	34	9/14/1990	Kern	1.8
9001-JG15-34D	propargite	37.9	41	34	9/14/1990	Kern	1.8
9001-JG16-000A	propargite	ND	41	Pre-application	9/14/1990	Kern	2.7
9001-JG16-000B	propargite	ND	42	Pre application	9/14/1990	Kern	2.7
9001-JG16-000C	propargite	ND	38	Pre-application	9/14/1990	Kern	2.7
9001-JG16-000D	propargite	ND	38	Pre-application	9/14/1990	Kern	2.7
9001-JG16-02B	propargite	1144	40	3	9/14/1990	Kern	2.7
9001-JG16-02C	propargite	310	40	3	9/14/1990	Kern	2.7
9001-JG16-02D	propargite	1483	40	3	9/14/1990	Kern	2.7
9001-JG16-06A	propargite	911	40	6	9/14/1990	Kern	2.7
9001-JG16-06B	propargite	1271	42	6	9/14/1990	Kern	2.7
9001-JG16-06C	propargite	308	51	6	9/14/1990	Kern	2.7
9001-JG16-06D	propargite	1431	47	6	9/14/1990	Kern	2.7
9001-JG16-13A	propargite	175	40	13	9/14/1990	Kern	2.7
9001-JG16-13B	propargite	133	40	13	9/14/1990	Kern	2.7
9001-JG16-13C	propargite	45.0	42	13	9/14/1990	Kern	2.7
9001-JG16-13D	propargite	410	42	13	9/14/1990	Kern	2.7
9001-JG16-20A	propargite	104.6	40	20	9/14/1990	Kern	2.7
9001-JG16-20B	propargite	102.8	40	20	9/14/1990	Kern	2.7
9001-JG16-20C	propargite	26.2	40	20	9/14/1990	Kern	2.7
9001-JG16-20D	propargite	121.8	40	20	9/14/1990	Kern	2.7
9001-JG16-26A	propargite	41.8	40	26	9/14/1990	Kern	2.7
9001-JG16-26B	propargite	72.1	40	26	9/14/1990	Kern	2.7
9001-JG16-26C	propargite	29.3	40	26	9/14/1990	Kern	2.7

1 Where MDL is specified, $\frac{1}{2}$ MDL was used to calculate sample DFR

2 Samples excluded from analysis were Days = "Pre-Application" and when μg = "ND" for all samples, by analyte, within sampling interval (shaded rows).

Appendix to HS-1810, A Study of Dislodgeable Foliar Residues (DFR) of Methomyl, Phosmet and Propargite on Grapes in Fresno, Kern and Madera Counties, 1990

Table 1. Raw Data for Study Samples (ai = active ingredient, MDL = Minimum Detection Limit, ND = Not Detected, U = Unknown)

WHS Sample #	Analyte	µg (MDL) ^{1,2}	# leaf discs	Days ²	Date Applied	County	lb/acre ai
9001-JG16-26D	propargite	71.3	40	26	9/14/1990	Kern	2.7
9001-JG16-34A	propargite	47.4	41	34	9/14/1990	Kern	2.7
9001-JG16-34B	propargite	102.5	40	34	9/14/1990	Kern	2.7
9001-JG16-34C	propargite	16.7	40	34	9/14/1990	Kern	2.7
9001-JG16-34D	propargite	49.8	41	34	9/14/1990	Kern	2.7
9001-JG17-000A	methomyl	ND	40	Pre-application	9/14/1990	Kern	0.45
9001-JG17-000B	methomyl	ND	41	Pre-application	9/14/1990	Kern	0.45
9001-JG17-000C	methomyl	ND	40	Pre-application	9/14/1990	Kern	0.45
9001-JG17-000D	methomyl	ND	40	Pre-application	9/14/1990	Kern	0.45
9001-JG17-02A	methomyl	91.0	40	3	9/14/1990	Kern	0.45
9001-JG17-02B	methomyl	54.9	39	3	9/14/1990	Kern	0.45
9001-JG17-02C	methomyl	59.8	41	3	9/14/1990	Kern	0.45
9001-JG17-02D	methomyl	47.9	40	3	9/14/1990	Kern	0.45
9001-JG17-06A	methomyl	13.7	40	6	9/14/1990	Kern	0.45
9001-JG17-06B	methomyl	13.5	40	6	9/14/1990	Kern	0.45
9001-JG17-06C	methomyl	28.0	40	6	9/14/1990	Kern	0.45
9001-JG17-06D	methomyl	2.85	15	6	9/14/1990	Kern	0.45
9001-JG17-13A	methomyl	1.18	40	13	9/14/1990	Kern	0.45
9001-JG17-13B	methomyl	0.42	40	13	9/14/1990	Kern	0.45
9001-JG17-13C	methomyl	1.83	40	13	9/14/1990	Kern	0.45
9001-JG17-13D	methomyl	ND (0.5)	40	13	9/14/1990	Kern	0.45
9001-JG17-20A	methomyl	ND	40	20	9/14/1990	Kern	0.45
9001-JG17-20B	methomyl	ND	40	20	9/14/1990	Kern	0.45
9001-JG17-20C	methomyl	ND	40	20	9/14/1990	Kern	0.45
9001-JG17-20D	methomyl	ND	40	20	9/14/1990	Kern	0.45
9001-JG17-26A	methomyl	ND	41	26	9/14/1990	Kern	0.45
9001-JG17-26B	methomyl	ND	39	26	9/14/1990	Kern	0.45
9001-JG17-26C	methomyl	ND	40	26	9/14/1990	Kern	0.45
9001-JG17-26D	methomyl	ND	40	26	9/14/1990	Kern	0.45
9001-JG18-000A	methomyl	ND	42	Pre-application	9/14/1990	Kern	0.9
9001-JG18-000B	methomyl	ND	43	Pre-application	9/14/1990	Kern	0.9
9001-JG18-000C	methomyl	ND	40	Pre-application	9/14/1990	Kern	0.9
9001-JG18-000D	methomyl	ND	42	Pre-application	9/14/1990	Kern	0.9
9001-JG18-02B	methomyl	81.3	40	3	9/14/1990	Kern	0.9
9001-JG18-02C	methomyl	102	40	3	9/14/1990	Kern	0.9
9001-JG18-02D	methomyl	77.1	42	3	9/14/1990	Kern	0.9
9001-JG18-13A	methomyl	0.89	40	13	9/14/1990	Kern	0.9
9001-JG18-13B	methomyl	ND (0.5)	40	13	9/14/1990	Kern	0.9

1 Where MDL is specified, ½ MDL was used to calculate sample DFR

2 Samples excluded from analysis were Days = "Pre-Application" and when µg = "ND" for all samples, by analyte, within sampling interval (shaded rows).

Appendix to HS-1810, A Study of Dislodgeable Foliar Residues (DFR) of Methomyl, Phosmet and Propargite on Grapes in Fresno, Kern and Madera Counties, 1990

Table 1. Raw Data for Study Samples (ai = active ingredient, MDL = Minimum Detection Limit, ND = Not Detected, U = Unknown)

WHS Sample #	Analyte	μg (MDL) ^{1,2}	# leaf discs	Days ²	Date Applied	County	lb/acre ai
9001-JG18-13C	methomyl	1.22	40	13	9/14/1990	Kern	0.9
9001-JG18-13D	methomyl	1.2	40	13	9/14/1990	Kern	0.9
9001-JG18-20A	methomyl	ND	41	20	9/14/1990	Kern	0.9
9001-JG18-20B	methomyl	ND	42	20	9/14/1990	Kern	0.9
9001-JG18-20C	methomyl	ND	40	20	9/14/1990	Kern	0.9
9001-JG18-20D	methomyl	ND	40	20	9/14/1990	Kern	0.9
9001-JG18-26A	methomyl	ND	40	26	9/14/1990	Kern	0.9
9001-JG18-26B	methomyl	ND	44	26	9/14/1990	Kern	0.9
9001-JG18-26C	methomyl	ND	39	26	9/14/1990	Kern	0.9
9001-JG18-26D	methomyl	ND	40	26	9/14/1990	Kern	0.9
9001-JG2-000A	methomyl	0.29	40	Pre-application	7/14/1990	Fresno	0.9
9001-JG2-000A	propargite	ND	40	Pre-application	7/14/1990	Fresno	2.4
9001-JG2-000B	methomyl	0.23	40	Pre-application	7/14/1990	Fresno	0.9
9001-JG2-000B	propargite	ND	40	Pre-application	7/14/1990	Fresno	2.4
9001-JG2-000C	methomyl	ND	40	Pre-application	7/14/1990	Fresno	0.9
9001-JG2-000C	propargite	ND	40	Pre-application	7/14/1990	Fresno	2.4
9001-JG2-000D	methomyl	ND	40	Pre-application	7/14/1990	Fresno	0.9
9001-JG2-000D	propargite	ND	40	Pre-application	7/14/1990	Fresno	2.4
9001-JG2-000E	methomyl	ND	40	Pre-application	7/14/1990	Fresno	0.9
9001-JG2-000E	propargite	ND	40	Pre-application	7/14/1990	Fresno	2.4
9001-JG2-004A	methomyl	77.4	40	2	7/14/1990	Fresno	0.9
9001-JG2-004A	propargite	835	40	2	7/14/1990	Fresno	2.4
9001-JG2-004B	methomyl	89.3	40	2	7/14/1990	Fresno	0.9
9001-JG2-004B	propargite	604	40	2	7/14/1990	Fresno	2.4
9001-JG2-004C	methomyl	27.4	40	2	7/14/1990	Fresno	0.9
9001-JG2-004C	propargite	375	40	2	7/14/1990	Fresno	2.4
9001-JG2-004D	methomyl	67.8	40	2	7/14/1990	Fresno	0.9
9001-JG2-004D	propargite	1170	40	2	7/14/1990	Fresno	2.4
9001-JG2-004E	methomyl	108	40	2	7/14/1990	Fresno	0.9
9001-JG2-004E	propargite	1059	40	2	7/14/1990	Fresno	2.4
9001-JG2-005A	methomyl	8.53	40	5	7/14/1990	Fresno	0.9
9001-JG2-005A	propargite	403	40	5	7/14/1990	Fresno	2.4
9001-JG2-005B	methomyl	9.25	40	5	7/14/1990	Fresno	0.9
9001-JG2-005B	propargite	454	40	5	7/14/1990	Fresno	2.4
9001-JG2-005C	methomyl	2.05	40	5	7/14/1990	Fresno	0.9
9001-JG2-005C	propargite	260	40	5	7/14/1990	Fresno	2.4
9001-JG2-005D	methomyl	8.39	40	5	7/14/1990	Fresno	0.9
9001-JG2-005D	propargite	377	40	5	7/14/1990	Fresno	2.4
9001-JG2-005E	methomyl	10.5	40	5	7/14/1990	Fresno	0.9
9001-JG2-005E	propargite	599	40	5	7/14/1990	Fresno	2.4

1 Where MDL is specified, $\frac{1}{2}$ MDL was used to calculate sample DFR

2 Samples excluded from analysis were Days = "Pre-Application" and when μg = "ND" for all samples, by analyte, within sampling interval (shaded rows).

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Table 1. Raw Data for Study Samples (ai = active ingredient, MDL = Minimum Detection Limit, ND = Not Detected, U = Unknown)

WHS Sample #	Analyte	μg (MDL) ^{1,2}	# leaf discs	Days ²	Date Applied	County	lb/acre ai
9001-JG2-012B	methomyl	2.2	40	12	7/14/1990	Fresno	0.9
9001-JG2-012B	propargite	148	40	12	7/14/1990	Fresno	2.4
9001-JG2-012D	methomyl	1.21	40	12	7/14/1990	Fresno	0.9
9001-JG2-012D	propargite	8.9	40	12	7/14/1990	Fresno	2.4
9001-JG2-012E	methomyl	2.46	40	12	7/14/1990	Fresno	0.9
9001-JG2-012E	propargite	48.8	40	12	7/14/1990	Fresno	2.4
9001-JG2-019A	methomyl	1.73	38	19	7/14/1990	Fresno	0.9
9001-JG2-019A	propargite	24.3	38	19	7/14/1990	Fresno	2.4
9001-JG2-019B	methomyl	0.48	40	19	7/14/1990	Fresno	0.9
9001-JG2-019B	propargite	54.3	40	19	7/14/1990	Fresno	2.4
9001-JG2-019C	methomyl	0.30	40	19	7/14/1990	Fresno	0.9
9001-JG2-019C	propargite	13.4	40	19	7/14/1990	Fresno	2.4
9001-JG2-019D	methomyl	1.11	41	19	7/14/1990	Fresno	0.9
9001-JG2-019D	propargite	34.2	41	19	7/14/1990	Fresno	2.4
9001-JG2-019E	methomyl	1.54	40	19	7/14/1990	Fresno	0.9
9001-JG2-019E	propargite	29.3	40	19	7/14/1990	Fresno	2.4
9001-JG2-026A	methomyl	0.63	42	26	7/14/1990	Fresno	0.9
9001-JG2-026A	propargite	25.4	42	26	7/14/1990	Fresno	2.4
9001-JG2-026B	methomyl	0.53	40	26	7/14/1990	Fresno	0.9
9001-JG2-026B	propargite	28.7	40	26	7/14/1990	Fresno	2.4
9001-JG2-026C	methomyl	0.82	40	26	7/14/1990	Fresno	0.9
9001-JG2-026C	propargite	33.1	40	26	7/14/1990	Fresno	2.4
9001-JG2-026D	methomyl	0.34	41	26	7/14/1990	Fresno	0.9
9001-JG2-026D	propargite	15.4	41	26	7/14/1990	Fresno	2.4
9001-JG2-026E	methomyl	0.42	40	26	7/14/1990	Fresno	0.9
9001-JG2-026E	propargite	33.9	40	26	7/14/1990	Fresno	2.4
9001-JG2-033A	methomyl	2.6	40	33	7/14/1990	Fresno	0.9
9001-JG2-033A	propargite	8.99	40	33	7/14/1990	Fresno	2.4
9001-JG2-033B	methomyl	1.0	40	33	7/14/1990	Fresno	0.9
9001-JG2-033B	propargite	ND (5)	40	33	7/14/1990	Fresno	2.4
9001-JG2-033C	methomyl	1.2	41	33	7/14/1990	Fresno	0.9
9001-JG2-033C	propargite	ND (5)	41	33	7/14/1990	Fresno	2.4
9001-JG2-033D	methomyl	0.8	40	33	7/14/1990	Fresno	0.9
9001-JG2-033D	propargite	ND (5)	40	33	7/14/1990	Fresno	2.4
9001-JG2-033E	methomyl	0.6	38	33	7/14/1990	Fresno	0.9
9001-JG2-033E	propargite	ND (5)	38	33	7/14/1990	Fresno	2.4
9001-JG20-02B	propargite	434	42	3	9/14/1990	Kern	0.9
9001-JG20-02D	propargite	479	40	3	9/14/1990	Kern	0.9
9001-JG20-06A	propargite	703	50	6	9/14/1990	Kern	0.9
9001-JG20-06B	propargite	374	43	6	9/14/1990	Kern	0.9

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Appendix to HS-1810, A Study of Dislodgeable Foliar Residues (DFR) of Methomyl, Phosmet and Propargite on Grapes in Fresno, Kern and Madera Counties, 1990

Table 1. Raw Data for Study Samples (ai = active ingredient, MDL = Minimum Detection Limit, ND = Not Detected, U = Unknown)

WHS Sample #	Analyte	μg (MDL) ^{1,2}	# leaf discs	Days ²	Date Applied	County	lb/acre ai
9001-JG20-06C	propargite	1066	45	6	9/14/1990	Kern	0.9
9001-JG20-06D	propargite	384	45	6	9/14/1990	Kern	0.9
9001-JG20-13A	propargite	172	40.5	13	9/14/1990	Kern	0.9
9001-JG20-13B	propargite	23.1	42	13	9/14/1990	Kern	0.9
9001-JG20-13C	propargite	44.8	42	13	9/14/1990	Kern	0.9
9001-JG20-13D	propargite	104	41	13	9/14/1990	Kern	0.9
9001-JG20-20A	propargite	62.5	40	20	9/14/1990	Kern	0.9
9001-JG20-20B	propargite	8.69	40	20	9/14/1990	Kern	0.9
9001-JG20-20C	propargite	99.9	37	20	9/14/1990	Kern	0.9
9001-JG20-20D	propargite	11.3	40	20	9/14/1990	Kern	0.9
9001-JG20-26A	propargite	81.9	40.5	26	9/14/1990	Kern	0.9
9001-JG20-26B	propargite	10.5	40.5	26	9/14/1990	Kern	0.9
9001-JG20-26C	propargite	108.7	40.5	26	9/14/1990	Kern	0.9
9001-JG20-26D	propargite	35.9	40	26	9/14/1990	Kern	0.9
9001-JG20-34A	propargite	95.0	39.5	34	9/14/1990	Kern	0.9
9001-JG20-34B	propargite	15.9	43	34	9/14/1990	Kern	0.9
9001-JG20-34C	propargite	99.4	40	34	9/14/1990	Kern	0.9
9001-JG20-34D	propargite	13.3	42	34	9/14/1990	Kern	0.9
9001-JG21-02B	propargite	170	40.5	3	9/14/1990	Kern	1.8
9001-JG21-02C	propargite	269	40	3	9/14/1990	Kern	1.8
9001-JG21-02D	propargite	152	40	3	9/14/1990	Kern	1.8
9001-JG21-06A	propargite	200	41	6	9/14/1990	Kern	1.8
9001-JG21-06B	propargite	39.4	43	6	9/14/1990	Kern	1.8
9001-JG21-06C	propargite	150	40.5	6	9/14/1990	Kern	1.8
9001-JG21-06D	propargite	123	38	6	9/14/1990	Kern	1.8
9001-JG21-13A	propargite	28.9	40	13	9/14/1990	Kern	1.8
9001-JG21-13B	propargite	9.88	40	13	9/14/1990	Kern	1.8
9001-JG21-13C	propargite	21.8	40	13	9/14/1990	Kern	1.8
9001-JG21-13D	propargite	32.3	40	13	9/14/1990	Kern	1.8
9001-JG21-20A	propargite	6.39	39	20	9/14/1990	Kern	1.8
9001-JG21-20B	propargite	7.05	42	20	9/14/1990	Kern	1.8
9001-JG21-20C	propargite	19.4	39	20	9/14/1990	Kern	1.8
9001-JG21-20D	propargite	ND	41	20	9/14/1990	Kern	1.8
9001-JG21-26A	propargite	14.3	40	26	9/14/1990	Kern	1.8
9001-JG21-26B	propargite	20.1	40	26	9/14/1990	Kern	1.8
9001-JG21-26C	propargite	9.34	40	26	9/14/1990	Kern	1.8
9001-JG21-26D	propargite	19.4	40.5	26	9/14/1990	Kern	1.8
9001-JG21-34A	propargite	ND	38	34	9/14/1990	Kern	1.8
9001-JG21-34B	propargite	ND	40	34	9/14/1990	Kern	1.8

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Table 1. Raw Data for Study Samples (ai = active ingredient, MDL = Minimum Detection Limit, ND = Not Detected, U = Unknown)

WHS Sample #	Analyte	μg (MDL) ^{1,2}	# leaf discs	Days ²	Date Applied	County	lb/acre ai
9001-JG21-34C	propargite	ND	40.5	34	9/14/1990	Kern	1.8
9001-JG21-34D	propargite	ND	40	34	9/14/1990	Kern	1.8
9001-JG22-02B	propargite	475	40	3	9/14/1990	Kern	2.7
9001-JG22-02D	propargite	544	41.5	3	9/14/1990	Kern	2.7
9001-JG22-06A	propargite	701	40	6	9/14/1990	Kern	2.7
9001-JG22-06B	propargite	401	40	6	9/14/1990	Kern	2.7
9001-JG22-06C	propargite	462	39	6	9/14/1990	Kern	2.7
9001-JG22-06D	propargite	210	37	6	9/14/1990	Kern	2.7
9001-JG22-13A	propargite	406	40	13	9/14/1990	Kern	2.7
9001-JG22-13B	propargite	19.5	40	13	9/14/1990	Kern	2.7
9001-JG22-13C	propargite	353	41	13	9/14/1990	Kern	2.7
9001-JG22-13D	propargite	18.1	41	13	9/14/1990	Kern	2.7
9001-JG22-20A	propargite	297.4	40	20	9/14/1990	Kern	2.7
9001-JG22-20B	propargite	20.8	40	20	9/14/1990	Kern	2.7
9001-JG22-20C	propargite	270.8	40	20	9/14/1990	Kern	2.7
9001-JG22-20D	propargite	23.6	41	20	9/14/1990	Kern	2.7
9001-JG22-26A	propargite	142.0	39	26	9/14/1990	Kern	2.7
9001-JG22-26B	propargite	15.4	38.5	26	9/14/1990	Kern	2.7
9001-JG22-26C	propargite	155.3	38	26	9/14/1990	Kern	2.7
9001-JG22-26D	propargite	10.8	34.5	26	9/14/1990	Kern	2.7
9001-JG22-34A	propargite	173	40.5	34	9/14/1990	Kern	2.7
9001-JG22-34B	propargite	ND (5)	37	34	9/14/1990	Kern	2.7
9001-JG22-34C	propargite	130.2	41	34	9/14/1990	Kern	2.7
9001-JG22-34D	propargite	ND (5)	38	34	9/14/1990	Kern	2.7
9001-JG23-02B	methomyl	41.4	40	3	9/14/1990	Kern	0.45
9001-JG23-02C	methomyl	56.55	40	3	9/14/1990	Kern	0.45
9001-JG23-02D	methomyl	59.4	40	3	9/14/1990	Kern	0.45
9001-JG23-06A	methomyl	26.5	40	6	9/14/1990	Kern	0.45
9001-JG23-06B	methomyl	32.4	45.5	6	9/14/1990	Kern	0.45
9001-JG23-06C	methomyl	49.8	42	6	9/14/1990	Kern	0.45
9001-JG23-06D	methomyl	33.5	40	6	9/14/1990	Kern	0.45
9001-JG23-13A	methomyl	ND (0.5)	40	13	9/14/1990	Kern	0.45
9001-JG23-13B	methomyl	ND (0.5)	39	13	9/14/1990	Kern	0.45
9001-JG23-13C	methomyl	1.04	39	13	9/14/1990	Kern	0.45
9001-JG23-13D	methomyl	0.63	40	13	9/14/1990	Kern	0.45
9001-JG23-20A	methomyl	ND	40	20	9/14/1990	Kern	0.45
9001-JG23-20B	methomyl	ND	40	20	9/14/1990	Kern	0.45
9001-JG23-20C	methomyl	ND	40.5	20	9/14/1990	Kern	0.45
9001-JG23-20D	methomyl	ND	40	20	9/14/1990	Kern	0.45
9001-JG23-26A	methomyl	ND	40.5	26	9/14/1990	Kern	0.45

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2 Samples excluded from analysis were Days = "Pre-Application" and when μg = "ND" for all samples, by analyte, within sampling interval (shaded rows).

Appendix to HS-1810, A Study of Dislodgeable Foliar Residues (DFR) of Methomyl, Phosmet and Propargite on Grapes in Fresno, Kern and Madera Counties, 1990

Table 1. Raw Data for Study Samples (ai = active ingredient, MDL = Minimum Detection Limit, ND = Not Detected, U = Unknown)

WHS Sample #	Analyte	μg (MDL) ^{1,2}	# leaf discs	Days ²	Date Applied	County	lb/acre ai
9001-JG23-26B	methomyl	ND	41	26	9/14/1990	Kern	0.45
9001-JG23-26C	methomyl	ND	40	26	9/14/1990	Kern	0.45
9001-JG23-26D	methomyl	ND	40	26	9/14/1990	Kern	0.45
9001-JG24-02B	methomyl	180	40	3	9/14/1990	Kern	0.9
9001-JG24-02C	methomyl	10.6	41	3	9/14/1990	Kern	0.9
9001-JG24-02D	methomyl	212	40.5	3	9/14/1990	Kern	0.9
9001-JG24-06A	methomyl	2.96	41	6	9/14/1990	Kern	0.9
9001-JG24-06B	methomyl	84.96	40	6	9/14/1990	Kern	0.9
9001-JG24-06C	methomyl	3.34	40	6	9/14/1990	Kern	0.9
9001-JG24-06D	methomyl	76.91	40.5	6	9/14/1990	Kern	0.9
9001-JG24-13A	methomyl	ND	40.5	13	9/14/1990	Kern	0.9
9001-JG24-13B	methomyl	ND	40	13	9/14/1990	Kern	0.9
9001-JG24-13C	methomyl	ND	40	13	9/14/1990	Kern	0.9
9001-JG24-13D	methomyl	ND	40	13	9/14/1990	Kern	0.9
9001-JG24-20A	methomyl	ND	40	20	9/14/1990	Kern	0.9
9001-JG24-20B	methomyl	ND	40	20	9/14/1990	Kern	0.9
9001-JG24-20C	methomyl	ND	39.5	20	9/14/1990	Kern	0.9
9001-JG24-20D	methomyl	ND	40	20	9/14/1990	Kern	0.9
9001-JG24-26A	methomyl	ND	40.5	26	9/14/1990	Kern	0.9
9001-JG24-26B	methomyl	ND	40	26	9/14/1990	Kern	0.9
9001-JG24-26C	methomyl	ND	41	26	9/14/1990	Kern	0.9
9001-JG24-26D	methomyl	ND	40.5	26	9/14/1990	Kern	0.9
9001-JG3-000A	methomyl	ND	40	Pre-application	7/13/1990	Fresno	0.9
9001-JG3-000A	propargite	ND	40	Pre-application	7/13/1990	Fresno	2.4
9001-JG3-000B	methomyl	0.16	40	Pre-application	7/13/1990	Fresno	0.9
9001-JG3-000B	propargite	ND	40	Pre-application	7/13/1990	Fresno	2.4
9001-JG3-000C	methomyl	1.48	40	Pre-application	7/13/1990	Fresno	0.9
9001-JG3-000C	propargite	ND	40	Pre-application	7/13/1990	Fresno	2.4
9001-JG3-000D	methomyl	ND	40	Pre-application	7/13/1990	Fresno	0.9
9001-JG3-000D	propargite	ND	40	Pre-application	7/13/1990	Fresno	2.4
9001-JG3-000E	methomyl	ND	40	Pre-application	7/13/1990	Fresno	0.9
9001-JG3-000E	propargite	ND	40	Pre-application	7/13/1990	Fresno	2.4
9001-JG3-001A	methomyl	523	40	3	7/13/1990	Fresno	0.9
9001-JG3-001A	propargite	2478	40	3	7/13/1990	Fresno	2.4
9001-JG3-001B	methomyl	39.6	40	3	7/13/1990	Fresno	0.9
9001-JG3-001B	propargite	454	40	3	7/13/1990	Fresno	2.4
9001-JG3-001C	methomyl	6.15	40	3	7/13/1990	Fresno	0.9
9001-JG3-001C	propargite	31.2	40	3	7/13/1990	Fresno	2.4
9001-JG3-001D	methomyl	89.1	40	3	7/13/1990	Fresno	0.9
9001-JG3-001D	propargite	324	40	3	7/13/1990	Fresno	2.4
9001-JG3-001E	methomyl	560	40	3	7/13/1990	Fresno	0.9

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Table 1. Raw Data for Study Samples (ai = active ingredient, MDL = Minimum Detection Limit, ND = Not Detected, U = Unknown)

WHS Sample #	Analyte	μg (MDL) ^{1,2}	# leaf discs	Days ²	Date Applied	County	lb/acre ai
9001-JG3-001E	propargite	2313	40	3	7/13/1990	Fresno	2.4
9001-JG3-004A	methomyl	92.0	40	3	7/13/1990	Fresno	0.9
9001-JG3-004A	propargite	2425	40	3	7/13/1990	Fresno	2.4
9001-JG3-004B	methomyl	130	40	3	7/13/1990	Fresno	0.9
9001-JG3-004B	propargite	2678	40	3	7/13/1990	Fresno	2.4
9001-JG3-004C	methomyl	118	40	3	7/13/1990	Fresno	0.9
9001-JG3-004C	propargite	1040	40	3	7/13/1990	Fresno	2.4
9001-JG3-004D	methomyl	128	40	3	7/13/1990	Fresno	0.9
9001-JG3-004D	propargite	1351	40	3	7/13/1990	Fresno	2.4
9001-JG3-006A	methomyl	20.4	40	6	7/13/1990	Fresno	0.9
9001-JG3-006A	propargite	1144	40	6	7/13/1990	Fresno	2.4
9001-JG3-006B	methomyl	39.4	40	6	7/13/1990	Fresno	0.9
9001-JG3-006B	propargite	1961	40	6	7/13/1990	Fresno	2.4
9001-JG3-006C	methomyl	9.49	40	6	7/13/1990	Fresno	0.9
9001-JG3-006C	propargite	1342	40	6	7/13/1990	Fresno	2.4
9001-JG3-006D	methomyl	16.8	40	6	7/13/1990	Fresno	0.9
9001-JG3-006D	propargite	835	40	6	7/13/1990	Fresno	2.4
9001-JG3-006E	methomyl	14.6	40	6	7/13/1990	Fresno	0.9
9001-JG3-006E	propargite	842	40	6	7/13/1990	Fresno	2.4
9001-JG3-013A	methomyl	8.96	40	13	7/13/1990	Fresno	0.9
9001-JG3-013A	propargite	223	40	13	7/13/1990	Fresno	2.4
9001-JG3-013B	methomyl	0.78	40	13	7/13/1990	Fresno	0.9
9001-JG3-013B	propargite	216	40	13	7/13/1990	Fresno	2.4
9001-JG3-013D	methomyl	2.54	39	13	7/13/1990	Fresno	0.9
9001-JG3-013D	propargite	687	39	13	7/13/1990	Fresno	2.4
9001-JG3-013E	methomyl	2.05	42	13	7/13/1990	Fresno	0.9
9001-JG3-013E	propargite	176	42	13	7/13/1990	Fresno	2.4
9001-JG3-020A	methomyl	2.84	40	20	7/13/1990	Fresno	0.9
9001-JG3-020A	propargite	158	40	20	7/13/1990	Fresno	2.4
9001-JG3-020B	methomyl	0.92	40	20	7/13/1990	Fresno	0.9
9001-JG3-020B	propargite	311.4	40	20	7/13/1990	Fresno	2.4
9001-JG3-020C	methomyl	1.14	40	20	7/13/1990	Fresno	0.9
9001-JG3-020C	propargite	189	40	20	7/13/1990	Fresno	2.4
9001-JG3-020D	methomyl	1.61	36	20	7/13/1990	Fresno	0.9
9001-JG3-020D	propargite	208	36	20	7/13/1990	Fresno	2.4
9001-JG3-020E	methomyl	1.16	43	20	7/13/1990	Fresno	0.9
9001-JG3-020E	propargite	94.1	43	20	7/13/1990	Fresno	2.4

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WHS Sample #	Analyte	µg (MDL) ^{1,2}	# leaf discs	Days ²	Date Applied	County	lb/acre ai
9001-JG3-027A	methomyl	0.62	40	27	7/13/1990	Fresno	0.9
9001-JG3-027A	propargite	114	40	27	7/13/1990	Fresno	2.4
9001-JG3-027B	methomyl	0.42	40	27	7/13/1990	Fresno	0.9
9001-JG3-027B	propargite	97.9	40	27	7/13/1990	Fresno	2.4
9001-JG3-027C	methomyl	0.47	41	27	7/13/1990	Fresno	0.9
9001-JG3-027C	propargite	119	41	27	7/13/1990	Fresno	2.4
9001-JG3-027D	methomyl	0.37	35	27	7/13/1990	Fresno	0.9
9001-JG3-027D	propargite	66.5	35	27	7/13/1990	Fresno	2.4
9001-JG3-027E	methomyl	0.34	38	27	7/13/1990	Fresno	0.9
9001-JG3-027E	propargite	149	38	27	7/13/1990	Fresno	2.4
9001-JG3-034A	methomyl	6.8	40	34	7/13/1990	Fresno	0.9
9001-JG3-034A	propargite	40.1	40	34	7/13/1990	Fresno	2.4
9001-JG3-034B	methomyl	1.0	40	34	7/13/1990	Fresno	0.9
9001-JG3-034B	propargite	52.3	40	34	7/13/1990	Fresno	2.4
9001-JG3-034C	methomyl	2.2	40	34	7/13/1990	Fresno	0.9
9001-JG3-034C	propargite	44.1	40	34	7/13/1990	Fresno	2.4
9001-JG3-034D	methomyl	1.4	40	34	7/13/1990	Fresno	0.9
9001-JG3-034D	propargite	35.0	40	34	7/13/1990	Fresno	2.4
9001-JG3-034E	methomyl	6.2	42	34	7/13/1990	Fresno	0.9
9001-JG3-034E	propargite	52.1	42	34	7/13/1990	Fresno	2.4
9001-JG3-040A	methomyl	ND	40	40	7/13/1990	Fresno	0.9
9001-JG3-040A	propargite	28.4	40	40	7/13/1990	Fresno	2.4
9001-JG3-040B	methomyl	ND	40	40	7/13/1990	Fresno	0.9
9001-JG3-040B	propargite	45.8	40	40	7/13/1990	Fresno	2.4
9001-JG3-040C	methomyl	ND	40	40	7/13/1990	Fresno	0.9
9001-JG3-040C	propargite	25.0	40	40	7/13/1990	Fresno	2.4
9001-JG3-040D	methomyl	ND	40	40	7/13/1990	Fresno	0.9
9001-JG3-040D	propargite	20.6	40	40	7/13/1990	Fresno	2.4
9001-JG3-040E	methomyl	ND	40	40	7/13/1990	Fresno	0.9
9001-JG3-040E	propargite	20.8	40	40	7/13/1990	Fresno	2.4
9001-JG4-000A	methomyl	ND	40	Pre-application	7/12/1990	Fresno	0.9
9001-JG4-000A	propargite	ND	40	Pre-application	7/12/1990	Fresno	1.8
9001-JG4-000B	methomyl	ND	40	Pre-application	7/12/1990	Fresno	0.9
9001-JG4-000B	propargite	ND	40	Pre-application	7/12/1990	Fresno	1.8
9001-JG4-000C	methomyl	ND	40	Pre-application	7/12/1990	Fresno	0.9
9001-JG4-000C	propargite	ND	40	Pre-application	7/12/1990	Fresno	1.8
9001-JG4-000D	methomyl	ND	40	Pre-application	7/12/1990	Fresno	0.9

1 Where MDL is specified, ½ MDL was used to calculate sample DFR

2 Samples excluded from analysis were Days = "Pre-Application" and when µg = "ND" for all samples, by analyte, within sampling interval (shaded rows).

Appendix to HS-1810, A Study of Dislodgeable Foliar Residues (DFR) of Methomyl, Phosmet and Propargite on Grapes in Fresno, Kern and Madera Counties, 1990

Table 1. Raw Data for Study Samples (ai = active ingredient, MDL = Minimum Detection Limit, ND = Not Detected, U = Unknown)

WHS Sample #	Analyte	μg (MDL) ^{1,2}	# leaf discs	Days ²	Date Applied	County	lb/acre ai
9001-JG4-000D	propargite	ND	40	Pre-application	7/12/1990	Fresno	1.8
9001-JG4-000E	methomyl	ND	40	Pre-application	7/12/1990	Fresno	0.9
9001-JG4-000E	propargite	ND	40	Pre-application	7/12/1990	Fresno	1.8
9001-JG4-001A	methomyl	106	40	1	7/12/1990	Fresno	0.9
9001-JG4-001A	propargite	932	40	1	7/12/1990	Fresno	1.8
9001-JG4-001B	methomyl	143	40	1	7/12/1990	Fresno	0.9
9001-JG4-001B	propargite	849	40	1	7/12/1990	Fresno	1.8
9001-JG4-001C	methomyl	149	40	1	7/12/1990	Fresno	0.9
9001-JG4-001C	propargite	1411	40	1	7/12/1990	Fresno	1.8
9001-JG4-001D	methomyl	127	40	1	7/12/1990	Fresno	0.9
9001-JG4-001D	propargite	1150	40	1	7/12/1990	Fresno	1.8
9001-JG4-001E	methomyl	168	40	1	7/12/1990	Fresno	0.9
9001-JG4-001E	propargite	1563	40	1	7/12/1990	Fresno	1.8
9001-JG4-004A	methomyl	55.0	40	4	7/12/1990	Fresno	0.9
9001-JG4-004A	propargite	1103	40	4	7/12/1990	Fresno	1.8
9001-JG4-004B	methomyl	28.7	40	4	7/12/1990	Fresno	0.9
9001-JG4-004B	propargite	579	40	4	7/12/1990	Fresno	1.8
9001-JG4-004C	methomyl	51.1	40	4	7/12/1990	Fresno	0.9
9001-JG4-004C	propargite	788	40	4	7/12/1990	Fresno	1.8
9001-JG4-004D	methomyl	32.4	40	4	7/12/1990	Fresno	0.9
9001-JG4-004D	propargite	675	40	4	7/12/1990	Fresno	1.8
9001-JG4-004E	methomyl	51.2	40	4	7/12/1990	Fresno	0.9
9001-JG4-004E	propargite	728	40	4	7/12/1990	Fresno	1.8
9001-JG4-007C	methomyl	14.1	40	7	7/12/1990	Fresno	0.9
9001-JG4-007C	propargite	983	40	7	7/12/1990	Fresno	1.8
9001-JG4-007D	methomyl	4.59	40	7	7/12/1990	Fresno	0.9
9001-JG4-007D	propargite	372	40	7	7/12/1990	Fresno	1.8
9001-JG4-007E	methomyl	6.23	40	7	7/12/1990	Fresno	0.9
9001-JG4-007E	propargite	645	40	7	7/12/1990	Fresno	1.8
9001-JG4-014A	methomyl	0.74	40	14	7/12/1990	Fresno	0.9
9001-JG4-014A	propargite	124	40	14	7/12/1990	Fresno	1.8
9001-JG4-014B	methomyl	1.38	40	14	7/12/1990	Fresno	0.9
9001-JG4-014B	propargite	36.4	40	14	7/12/1990	Fresno	1.8
9001-JG4-014C	propargite	165	40	14	7/12/1990	Fresno	1.8
9001-JG4-014D	methomyl	1.98	41	14	7/12/1990	Fresno	0.9
9001-JG4-014D	propargite	6.05	41	14	7/12/1990	Fresno	1.8

1 Where MDL is specified, $\frac{1}{2}$ MDL was used to calculate sample DFR

2 Samples excluded from analysis were Days = "Pre-Application" and when μg = "ND" for all samples, by analyte, within sampling interval (shaded rows).

Appendix to HS-1810, A Study of Dislodgeable Foliar Residues (DFR) of Methomyl, Phosmet and Propargite on Grapes in Fresno, Kern and Madera Counties, 1990

Table 1. Raw Data for Study Samples (ai = active ingredient, MDL = Minimum Detection Limit, ND = Not Detected, U = Unknown)

WHS Sample #	Analyte	μg (MDL) ^{1,2}	# leaf discs	Days ²	Date Applied	County	lb/acre ai
9001-JG4-014E	methomyl	1.66	40	14	7/12/1990	Fresno	0.9
9001-JG4-014E	propargite	142	40	14	7/12/1990	Fresno	1.8
9001-JG4-021A	methomyl	0.99	40	21	7/12/1990	Fresno	0.9
9001-JG4-021A	propargite	149	40	21	7/12/1990	Fresno	1.8
9001-JG4-021B	methomyl	4.06	38	21	7/12/1990	Fresno	0.9
9001-JG4-021B	propargite	12.5	38	21	7/12/1990	Fresno	1.8
9001-JG4-021C	methomyl	0.83	41	21	7/12/1990	Fresno	0.9
9001-JG4-021C	propargite	18.4	41	21	7/12/1990	Fresno	1.8
9001-JG4-021D	methomyl	0.59	38	21	7/12/1990	Fresno	0.9
9001-JG4-021E	methomyl	6.96	40	21	7/12/1990	Fresno	0.9
9001-JG4-021E	propargite	50.6	40	21	7/12/1990	Fresno	1.8
9001-JG4-028A	methomyl	0.16	39	28	7/12/1990	Fresno	0.9
9001-JG4-028A	propargite	8.9	39	28	7/12/1990	Fresno	1.8
9001-JG4-028B	methomyl	0.26	41	28	7/12/1990	Fresno	0.9
9001-JG4-028B	propargite	42.1	40	28	7/12/1990	Fresno	1.8
9001-JG4-028C	methomyl	0.16	40	28	7/12/1990	Fresno	0.9
9001-JG4-028C	propargite	27.0	40	28	7/12/1990	Fresno	1.8
9001-JG4-028E	methomyl	0.56	40	28	7/12/1990	Fresno	0.9
9001-JG4-028E	propargite	35.6	40	28	7/12/1990	Fresno	1.8
9001-JG5-000A	methomyl	ND	40	Pre-application	7/12/1990	Fresno	0.9
9001-JG5-000A	propargite	ND	40	Pre-application	7/12/1990	Fresno	1.8
9001-JG5-000B	methomyl	ND	40	Pre-applicaiton	7/12/1990	Fresno	0.9
9001-JG5-000B	propargite	ND	40	Pre-applicaiton	7/12/1990	Fresno	1.8
9001-JG5-000C	methomyl	ND	40	Pre-application	7/12/1990	Fresno	0.9
9001-JG5-000C	propargite	ND	40	Pre-application	7/12/1990	Fresno	1.8
9001-JG5-000D	methomyl	0.21	40	Pre-application	7/12/1990	Fresno	0.9
9001-JG5-000D	propargite	ND	40	Pre-application	7/12/1990	Fresno	1.8
9001-JG5-000E	methomyl	ND	40	Pre-application	7/12/1990	Fresno	0.9
9001-JG5-000E	propargite	ND	40	Pre-application	7/12/1990	Fresno	1.8
9001-JG5-001A	methomyl	576	40	1	7/12/1990	Fresno	0.9
9001-JG5-001A	propargite	1146	40	1	7/12/1990	Fresno	1.8
9001-JG5-001B	methomyl	280	40	1	7/12/1990	Fresno	0.9
9001-JG5-001B	propargite	519	40	1	7/12/1990	Fresno	1.8
9001-JG5-001C	methomyl	548	40	1	7/12/1990	Fresno	0.9
9001-JG5-001C	propargite	1169	40	1	7/12/1990	Fresno	1.8
9001-JG5-001D	methomyl	400	40	1	7/12/1990	Fresno	0.9
9001-JG5-001D	propargite	1068	40	1	7/12/1990	Fresno	1.8

1 Where MDL is specified, $\frac{1}{2}$ MDL was used to calculate sample DFR

2 Samples excluded from analysis were Days = "Pre-Application" and when μg = "ND" for all samples, by analyte, within sampling interval (shaded rows).

Appendix to HS-1810, A Study of Dislodgeable Foliar Residues (DFR) of Methomyl, Phosmet and Propargite on Grapes in Fresno, Kern and Madera Counties, 1990

Table 1. Raw Data for Study Samples (ai = active ingredient, MDL = Minimum Detection Limit, ND = Not Detected, U = Unknown)

WHS Sample #	Analyte	µg (MDL) ^{1,2}	# leaf discs	Days ²	Date Applied	County	lb/acre ai
9001-JG5-001E	methomyl	348	40	1	7/12/1990	Fresno	0.9
9001-JG5-001E	propargite	865	40	1	7/12/1990	Fresno	1.8
9001-JG5-004D	methomyl	60.2	40	4	7/12/1990	Fresno	0.9
9001-JG5-004D	propargite	793	40	4	7/12/1990	Fresno	1.8
9001-JG5-007A	methomyl	15.8	40	7	7/12/1990	Fresno	0.9
9001-JG5-007A	propargite	330	40	7	7/12/1990	Fresno	1.8
9001-JG5-007D	methomyl	6.2	40	7	7/12/1990	Fresno	0.9
9001-JG5-007D	propargite	374	40	7	7/12/1990	Fresno	1.8
9001-JG5-007E	methomyl	4.69.	40	7	7/12/1990	Fresno	0.9
9001-JG5-007E	propargite	139	40	7	7/12/1990	Fresno	1.8
9001-JG5-014A	methomyl	2.80	40	14	7/12/1990	Fresno	0.9
9001-JG5-014A	propargite	98.6	40	14	7/12/1990	Fresno	1.8
9001-JG5-014B	methomyl	1.02	36	14	7/12/1990	Fresno	0.9
9001-JG5-014B	propargite	26.0	36	14	7/12/1990	Fresno	1.8
9001-JG5-014C	methomyl	1.39	38	14	7/12/1990	Fresno	0.9
9001-JG5-014C	propargite	89.1	38	14	7/12/1990	Fresno	1.8
9001-JG5-014E	methomyl	1.14	39	14	7/12/1990	Fresno	0.9
9001-JG5-014E	propargite	39.7	39	14	7/12/1990	Fresno	1.8
9001-JG5-021A	methomyl	0.58	40	21	7/12/1990	Fresno	0.9
9001-JG5-021A	propargite	ND (5)	40	21	7/12/1990	Fresno	1.8
9001-JG5-021B	methomyl	0.48	39	21	7/12/1990	Fresno	0.9
9001-JG5-021B	propargite	ND (5)	39	21	7/12/1990	Fresno	1.8
9001-JG5-021C	methomyl	0.54	40	21	7/12/1990	Fresno	0.9
9001-JG5-021C	propargite	ND (5)	40	21	7/12/1990	Fresno	1.8
9001-JG5-021D	methomyl	2.17	38	21	7/12/1990	Fresno	0.9
9001-JG5-021D	propargite	9.8	38	21	7/12/1990	Fresno	1.8
9001-JG5-021E	methomyl	1.35	42	21	7/12/1990	Fresno	0.9
9001-JG5-028D	methomyl	ND (2)	40	28	7/12/1990	Fresno	0.9
9001-JG5-028D	propargite	44.4	40	28	7/12/1990	Fresno	1.8
9001-JG6-000A	methomyl	0.37	40	Pre-application	7/12/1990	Madera	0.9
9001-JG6-000A	propargite	ND	40	Pre-application	7/12/1990	Madera	1.8
9001-JG6-000B	methomyl	1.37	40	Pre-application	7/12/1990	Madera	0.9
9001-JG6-000B	propargite	ND	40	Pre-application	7/12/1990	Madera	1.8
9001-JG6-000C	methomyl	1.49	40	Pre-application	7/12/1990	Madera	0.9
9001-JG6-000C	propargite	ND	40	Pre-application	7/12/1990	Madera	1.8
9001-JG6-000D	methomyl	0.66	40	Pre-application	7/12/1990	Madera	0.9
9001-JG6-000D	propargite	ND	40	Pre-application	7/12/1990	Madera	1.8
9001-JG6-000E	methomyl	0.30	40	Pre-application	7/12/1990	Madera	0.9

1 Where MDL is specified, ½ MDL was used to calculate sample DFR

2 Samples excluded from analysis were Days = "Pre-Application" and when µg = "ND" for all samples, by analyte, within sampling interval (shaded rows).

Appendix to HS-1810, A Study of Dislodgeable Foliar Residues (DFR) of Methomyl, Phosmet and Propargite on Grapes in Fresno, Kern and Madera Counties, 1990

Table 1. Raw Data for Study Samples (ai = active ingredient, MDL = Minimum Detection Limit, ND = Not Detected, U = Unknown)

WHS Sample #	Analyte	μg (MDL) ^{1,2}	# leaf discs	Days ²	Date Applied	County	lb/acre ai
9001-JG6-000E	propargite	ND	40	Pre-application	7/12/1990	Madera	1.8
9001-JG6-001A	methomyl	566	40	1	7/12/1990	Madera	0.9
9001-JG6-001A	propargite	1557	40	1	7/12/1990	Madera	1.8
9001-JG6-001B	methomyl	2.25	40	U	7/12/1990	Madera	0.9
9001-JG6-001B	propargite	85.6	40	U	7/12/1990	Madera	1.8
9001-JG6-001C	methomyl	0.50	40	U	7/12/1990	Madera	0.9
9001-JG6-001C	propargite	23.4	40	U	7/12/1990	Madera	1.8
9001-JG6-001D	methomyl	2.21	40	U	7/12/1990	Madera	0.9
9001-JG6-001D	propargite	10.5	40	U	7/12/1990	Madera	1.8
9001-JG6-001E	methomyl	571	40	1	7/12/1990	Madera	0.9
9001-JG6-001E	propargite	1580	40	1	7/12/1990	Madera	1.8
9001-JG6-003A	methomyl	79.0	40	3	7/12/1990	Madera	0.9
9001-JG6-003A	propargite	1406	40	3	7/12/1990	Madera	1.8
9001-JG6-003B	methomyl	1035	40	U	7/12/1990	Madera	0.9
9001-JG6-003B	propargite	2099	40	U	7/12/1990	Madera	1.8
9001-JG6-003C	methomyl	0.80	40	U	7/12/1990	Madera	0.9
9001-JG6-003C	propargite	ND (50)	40	U	7/12/1990	Madera	1.8
9001-JG6-003D	methomyl	1.96	40	U	7/12/1990	Madera	0.9
9001-JG6-003D	propargite	ND (50)	40	U	7/12/1990	Madera	1.8
9001-JG6-003E	methomyl	41.36	40	3	7/12/1990	Madera	0.9
9001-JG6-003E	propargite	662	40	3	7/12/1990	Madera	1.8
9001-JG6-006A	methomyl	28.6	40	6	7/12/1990	Madera	0.9
9001-JG6-006A	propargite	580	40	6	7/12/1990	Madera	1.8
9001-JG6-006B	methomyl	155	40	U	7/12/1990	Madera	0.9
9001-JG6-006B	propargite	1169	40	U	7/12/1990	Madera	1.8
9001-JG6-006C	methomyl	1006	40	U	7/12/1990	Madera	0.9
9001-JG6-006C	propargite	4212	40	U	7/12/1990	Madera	1.8
9001-JG6-006D	methomyl	864	40	U	7/12/1990	Madera	0.9
9001-JG6-006D	propargite	3321	40	U	7/12/1990	Madera	1.8
9001-JG6-006E	methomyl	4.70	40	6	7/12/1990	Madera	0.9
9001-JG6-006E	propargite	552	40	6	7/12/1990	Madera	1.8
9001-JG6-012A	methomyl	7.02	40	13	7/12/1990	Madera	0.9
9001-JG6-012A	propargite	200	40	13	7/12/1990	Madera	1.8
9001-JG6-012B	methomyl	64.8	40	U	7/12/1990	Madera	0.9
9001-JG6-012B	propargite	193	40	U	7/12/1990	Madera	1.8
9001-JG6-012C	methomyl	10.7	40	U	7/12/1990	Madera	0.9

1 Where MDL is specified, $\frac{1}{2}$ MDL was used to calculate sample DFR

2 Samples excluded from analysis were Days = "Pre-Application" and when μg = "ND" for all samples, by analyte, within sampling interval (shaded rows).

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Table 1. Raw Data for Study Samples (ai = active ingredient, MDL = Minimum Detection Limit, ND = Not Detected, U = Unknown)

WHS Sample #	Analyte	µg (MDL) ^{1,2}	# leaf discs	Days ²	Date Applied	County	lb/acre ai
9001-JG6-012C	propargite	626	40	U	7/12/1990	Madera	1.8
9001-JG6-012D	methomyl	12.9	43	U	7/12/1990	Madera	0.9
9001-JG6-012D	propargite	822	43	U	7/12/1990	Madera	1.8
9001-JG6-012E	methomyl	3.94	40	12	7/12/1990	Madera	0.9
9001-JG6-012E	propargite	88.2	40	12	7/12/1990	Madera	1.8
9001-JG6-020A	methomyl	11.4	39	20	7/12/1990	Madera	0.9
9001-JG6-020C	methomyl	2.78	40	U	7/12/1990	Madera	0.9
9001-JG6-020C	propargite	385	40	U	7/12/1990	Madera	1.8
9001-JG6-020D	methomyl	9.03	44	U	7/12/1990	Madera	0.9
9001-JG6-020D	propargite	59.3	44	U	7/12/1990	Madera	1.8
9001-JG6-020E	methomyl	0.32	41	20	7/12/1990	Madera	0.9
9001-JG6-020E	propargite	ND (5)	41	20	7/12/1990	Madera	1.8
9001-JG6-027A	methomyl	7.36	40	27	7/12/1990	Madera	0.9
9001-JG6-027A	propargite	20.4	40	27	7/12/1990	Madera	1.8
9001-JG6-027B	methomyl	31.6	41	U	7/12/1990	Madera	0.9
9001-JG6-027B	propargite	23.2	41	U	7/12/1990	Madera	1.8
9001-JG6-027C	methomyl	2.31	40	U	7/12/1990	Madera	0.9
9001-JG6-027C	propargite	62.0	40	U	7/12/1990	Madera	1.8
9001-JG6-027D	methomyl	1.24	41	U	7/12/1990	Madera	0.9
9001-JG6-027D	propargite	82.9	41	U	7/12/1990	Madera	1.8
9001-JG6-027E	methomyl	1.24	37	27	7/12/1990	Madera	0.9
9001-JG6-027E	propargite	62.5	37	27	7/12/1990	Madera	1.8
9001-JG6-034A	methomyl	ND	40	34	7/12/1990	Madera	0.9
9001-JG6-034A	propargite	ND (5)	40	34	7/12/1990	Madera	1.8
9001-JG6-034B	methomyl	ND	38	U	7/12/1990	Madera	0.9
9001-JG6-034B	propargite	30.2	38	U	7/12/1990	Madera	1.8
9001-JG6-034C	methomyl	ND	39	U	7/12/1990	Madera	0.9
9001-JG6-034C	propargite	15.4	39	U	7/12/1990	Madera	1.8
9001-JG6-034D	methomyl	ND	44	U	7/12/1990	Madera	0.9
9001-JG6-034D	propargite	29.3	44	U	7/12/1990	Madera	1.8
9001-JG6-034E	methomyl	ND	41	34	7/12/1990	Madera	0.9
9001-JG6-034E	propargite	ND (5)	41	34	7/12/1990	Madera	1.8
9001-JG7-000A	phosmet	139	40	Pre-application	7/12/1990	Madera	unknown
9001-JG7-000A	propargite	ND	40	Pre-application	7/12/1990	Madera	unknown
9001-JG7-000B	phosmet	133	40	Pre-application	7/12/1990	Madera	unknown
9001-JG7-000B	propargite	ND	40	Pre-application	7/12/1990	Madera	unknown
9001-JG7-000C	phosmet	84	40	Pre-application	7/12/1990	Madera	unknown
9001-JG7-000C	propargite	ND	40	Pre-application	7/12/1990	Madera	unknown
9001-JG7-000D	phosmet	42.0	40	Pre-application	7/12/1990	Madera	unknown

1 Where MDL is specified, $\frac{1}{2}$ MDL was used to calculate sample DFR

2 Samples excluded from analysis were Days = "Pre-Application" and when µg = "ND" for all samples, by analyte, within sampling interval (shaded rows).

Appendix to HS-1810, A Study of Dislodgeable Foliar Residues (DFR) of Methomyl, Phosmet and Propargite on Grapes in Fresno, Kern and Madera Counties, 1990

Table 1. Raw Data for Study Samples (ai = active ingredient, MDL = Minimum Detection Limit, ND = Not Detected, U = Unknown)

WHS Sample #	Analyte	μg (MDL) ^{1,2}	# leaf discs	Days ²	Date Applied	County	lb/acre ai
9001-JG7-000D	propargite	ND	40	Pre-application	7/12/1990	Madera	unknown
9001-JG7-000E	phosmet	162	40	Pre-application	7/12/1990	Madera	unknown
9001-JG7-000E	propargite	ND	40	Pre-application	7/12/1990	Madera	unknown
9001-JG7-001A	phosmet	1184	40	1	7/12/1990	Madera	unknown
9001-JG7-001A	propargite	1629.5	40	1	7/12/1990	Madera	unknown
9001-JG7-001B	phosmet	915	40	1	7/12/1990	Madera	unknown
9001-JG7-001B	propargite	1537.6	40	1	7/12/1990	Madera	unknown
9001-JG7-001C	phosmet	896	40	1	7/12/1990	Madera	unknown
9001-JG7-001C	propargite	1540.5	40	1	7/12/1990	Madera	unknown
9001-JG7-001D	phosmet	690	40	1	7/12/1990	Madera	unknown
9001-JG7-001D	propargite	887.1	40	1	7/12/1990	Madera	unknown
9001-JG7-001E	phosmet	823	40	1	7/12/1990	Madera	unknown
9001-JG7-001E	propargite	921.6	40	1	7/12/1990	Madera	unknown
9001-JG7-004A	phosmet	648	40	4	7/12/1990	Madera	unknown
9001-JG7-004A	propargite	808.7	40	4	7/12/1990	Madera	unknown
9001-JG7-004B	phosmet	609	40	4	7/12/1990	Madera	unknown
9001-JG7-004B	propargite	556.8	40	4	7/12/1990	Madera	unknown
9001-JG7-004C	phosmet	366	40	4	7/12/1990	Madera	unknown
9001-JG7-004C	propargite	334.0	40	4	7/12/1990	Madera	unknown
9001-JG7-004D	phosmet	599	40	4	7/12/1990	Madera	unknown
9001-JG7-004D	propargite	631.4	40	4	7/12/1990	Madera	unknown
9001-JG7-004E	phosmet	469	40	4	7/12/1990	Madera	unknown
9001-JG7-004E	propargite	685.6	40	4	7/12/1990	Madera	unknown
9001-JG7-018A	phosmet	179	39	18	7/12/1990	Madera	unknown
9001-JG7-018A	propargite	32.0	39	18	7/12/1990	Madera	unknown
9001-JG7-018B	phosmet	209	40	18	7/12/1990	Madera	unknown
9001-JG7-018B	propargite	40.3	40	18	7/12/1990	Madera	unknown
9001-JG7-018C	phosmet	86.2	40	18	7/12/1990	Madera	unknown
9001-JG7-018C	propargite	29.0	40	18	7/12/1990	Madera	unknown
9001-JG7-018D	phosmet	127	40	18	7/12/1990	Madera	unknown
9001-JG7-018D	propargite	19.5	40	18	7/12/1990	Madera	unknown
9001-JG7-018E	phosmet	119	38	18	7/12/1990	Madera	unknown
9001-JG7-018E	propargite	33.4	38	18	7/12/1990	Madera	unknown
9001-JG7-021A	phosmet	135	40	21	7/12/1990	Madera	unknown
9001-JG7-021A	propargite	18.4	40	21	7/12/1990	Madera	unknown

1 Where MDL is specified, $\frac{1}{2}$ MDL was used to calculate sample DFR

2 Samples excluded from analysis were Days = "Pre-Application" and when μg = "ND" for all samples, by analyte, within sampling interval (shaded rows).

Appendix to HS-1810, A Study of Dislodgeable Foliar Residues (DFR) of Methomyl, Phosmet and Propargite on Grapes in Fresno, Kern and Madera Counties, 1990

Table 1. Raw Data for Study Samples (ai = active ingredient, MDL = Minimum Detection Limit, ND = Not Detected, U = Unknown)

WHS Sample #	Analyte	µg (MDL) ^{1,2}	# leaf discs	Days ²	Date Applied	County	lb/acre ai
9001-JG7-021B	phosmet	184	40	21	7/12/1990	Madera	unknown
9001-JG7-021B	propargite	10.3	40	21	7/12/1990	Madera	unknown
9001-JG7-021C	phosmet	97.6	40	21	7/12/1990	Madera	unknown
9001-JG7-021C	propargite	20.5	40	21	7/12/1990	Madera	unknown
9001-JG7-021D	phosmet	132	42	21	7/12/1990	Madera	unknown
9001-JG7-021D	propargite	32.0	42	21	7/12/1990	Madera	unknown
9001-JG7-021E	phosmet	99.2	38	21	7/12/1990	Madera	unknown
9001-JG7-021E	propargite	ND (5)	38	21	7/12/1990	Madera	unknown
9001-JG7-028A	phosmet	83.3	40	28	7/12/1990	Madera	unknown
9001-JG7-028A	propargite	18.61	40	28	7/12/1990	Madera	unknown
9001-JG7-028B	phosmet	76.7	40	28	7/12/1990	Madera	unknown
9001-JG7-028B	propargite	9.33	40	28	7/12/1990	Madera	unknown
9001-JG7-028C	phosmet	39.5	38	28	7/12/1990	Madera	unknown
9001-JG7-028C	propargite	10.11	38	28	7/12/1990	Madera	unknown
9001-JG7-028D	phosmet	65.1	40	28	7/12/1990	Madera	unknown
9001-JG7-028D	propargite	15.34	40	28	7/12/1990	Madera	unknown
9001-JG7-028E	phosmet	58.3	40	28	7/12/1990	Madera	unknown
9001-JG7-028E	propargite	16.08	40	28	7/12/1990	Madera	unknown
9001-JG7-035A	phosmet	56.9	39	35	7/12/1990	Madera	unknown
9001-JG7-035A	propargite	ND	39	35	7/12/1990	Madera	unknown
9001-JG7-035B	phosmet	94.2	40	35	7/12/1990	Madera	unknown
9001-JG7-035B	propargite	ND	40	35	7/12/1990	Madera	unknown
9001-JG7-035C	phosmet	48.3	40	35	7/12/1990	Madera	unknown
9001-JG7-035C	propargite	ND	40	35	7/12/1990	Madera	unknown
9001-JG7-035D	phosmet	39.4	40	35	7/12/1990	Madera	unknown
9001-JG7-035D	propargite	ND	40	35	7/12/1990	Madera	unknown
9001-JG7-035E	phosmet	49.3	40	35	7/12/1990	Madera	unknown
9001-JG7-035E	propargite	ND	40	35	7/12/1990	Madera	unknown
9001-JG8-000A	phosmet	79.4	40	Pre-application	7/12/1990	Madera	unknown
9001-JG8-000A	propargite	ND	40	Pre-application	7/12/1990	Madera	unknown
9001-JG8-000B	phosmet	138	40	Pre-application	7/12/1990	Madera	unknown
9001-JG8-000B	propargite	ND	40	Pre-application	7/12/1990	Madera	unknown
9001-JG8-000C	phosmet	96.0	40	Pre-application	7/12/1990	Madera	unknown
9001-JG8-000C	propargite	ND	40	Pre-application	7/12/1990	Madera	unknown
9001-JG8-000D	phosmet	142	40	Pre-application	7/12/1990	Madera	unknown

1 Where MDL is specified, $\frac{1}{2}$ MDL was used to calculate sample DFR

2 Samples excluded from analysis were Days = "Pre-Application" and when µg = "ND" for all samples, by analyte, within sampling interval (shaded rows).

Appendix to HS-1810, A Study of Dislodgeable Foliar Residues (DFR) of Methomyl, Phosmet and Propargite on Grapes in Fresno, Kern and Madera Counties, 1990

Table 1. Raw Data for Study Samples (ai = active ingredient, MDL = Minimum Detection Limit, ND = Not Detected, U = Unknown)

WHS Sample #	Analyte	μg (MDL) ^{1,2}	# leaf discs	Days ²	Date Applied	County	lb/acre ai
9001-JG8-000D	propargite	ND	40	Pre-application	7/12/1990	Madera	unknown
9001-JG8-000E	phosmet	69.4	40	Pre-application	7/12/1990	Madera	unknown
9001-JG8-000E	propargite	ND	40	Pre-application	7/12/1990	Madera	unknown
9001-JG8-001A	phosmet	1128	40	1	7/12/1990	Madera	unknown
9001-JG8-001A	propargite	1424	40	1	7/12/1990	Madera	unknown
9001-JG8-001B	phosmet	835	40	1	7/12/1990	Madera	unknown
9001-JG8-001B	propargite	1270.3	40	1	7/12/1990	Madera	unknown
9001-JG8-001C	phosmet	1397	40	1	7/12/1990	Madera	unknown
9001-JG8-001C	propargite	2045.5	40	1	7/12/1990	Madera	unknown
9001-JG8-001D	phosmet	856	40	1	7/12/1990	Madera	unknown
9001-JG8-001D	propargite	1035.1	40	1	7/12/1990	Madera	unknown
9001-JG8-001E	phosmet	1349	40	1	7/12/1990	Madera	unknown
9001-JG8-001E	propargite	1474.4	40	1	7/12/1990	Madera	unknown
9001-JG8-004A	phosmet	765	40	4	7/12/1990	Madera	unknown
9001-JG8-004A	propargite	689.0	40	4	7/12/1990	Madera	unknown
9001-JG8-004B	phosmet	826	40	4	7/12/1990	Madera	unknown
9001-JG8-004B	propargite	1008.0	40	4	7/12/1990	Madera	unknown
9001-JG8-004C	phosmet	536	40	4	7/12/1990	Madera	unknown
9001-JG8-004C	propargite	554.6	40	4	7/12/1990	Madera	unknown
9001-JG8-004D	phosmet	738	40	4	7/12/1990	Madera	unknown
9001-JG8-004D	propargite	490	40	4	7/12/1990	Madera	unknown
9001-JG8-004E	phosmet	798	37	4	7/12/1990	Madera	unknown
9001-JG8-004E	propargite	805	37	4	7/12/1990	Madera	unknown
9001-JG8-007A	phosmet	376	40	7	7/12/1990	Madera	unknown
9001-JG8-007A	propargite	386.7	40	7	7/12/1990	Madera	unknown
9001-JG8-007B	phosmet	432	40	7	7/12/1990	Madera	unknown
9001-JG8-007B	propargite	220.7	40	7	7/12/1990	Madera	unknown
9001-JG8-007C	phosmet	495	40	7	7/12/1990	Madera	unknown
9001-JG8-007C	propargite	259.0	40	7	7/12/1990	Madera	unknown
9001-JG8-007D	phosmet	473	40	7	7/12/1990	Madera	unknown
9001-JG8-007D	propargite	636.0	40	7	7/12/1990	Madera	unknown
9001-JG8-007E	phosmet	602	40	7	7/12/1990	Madera	unknown
9001-JG8-007E	propargite	636.0	40	7	7/12/1990	Madera	unknown
9001-JG8-014A	phosmet	247	40	14	7/12/1990	Madera	unknown
9001-JG8-014A	propargite	222	40	14	7/12/1990	Madera	unknown

1 Where MDL is specified, $\frac{1}{2}$ MDL was used to calculate sample DFR

2 Samples excluded from analysis were Days = "Pre-Application" and when μg = "ND" for all samples, by analyte, within sampling interval (shaded rows).

Appendix to HS-1810, A Study of Dislodgeable Foliar Residues (DFR) of Methomyl, Phosmet and Propargite on Grapes in Fresno, Kern and Madera Counties, 1990

Table 1. Raw Data for Study Samples (ai = active ingredient, MDL = Minimum Detection Limit, ND = Not Detected, U = Unknown)

WHS Sample #	Analyte	µg (MDL) ^{1,2}	# leaf discs	Days ²	Date Applied	County	lb/acre ai
9001-JG8-014B	phosmet	200	39	14	7/12/1990	Madera	unknown
9001-JG8-014B	propargite	67.2	39	14	7/12/1990	Madera	unknown
9001-JG8-014C	phosmet	187	38	14	7/12/1990	Madera	unknown
9001-JG8-014C	propargite	59.1	38	14	7/12/1990	Madera	unknown
9001-JG8-014D	phosmet	239	42	14	7/12/1990	Madera	unknown
9001-JG8-014D	propargite	64.2	42	14	7/12/1990	Madera	unknown
9001-JG8-021A	phosmet	143	37	21	7/12/1990	Madera	unknown
9001-JG8-021A	propargite	39.1	37	21	7/12/1990	Madera	unknown
9001-JG8-021B	phosmet	131	40	21	7/12/1990	Madera	unknown
9001-JG8-021B	propargite	18.5	40	21	7/12/1990	Madera	unknown
9001-JG8-021C	phosmet	159	37	21	7/12/1990	Madera	unknown
9001-JG8-021C	propargite	53.8	37	21	7/12/1990	Madera	unknown
9001-JG8-021D	phosmet	2.52	41	21	7/12/1990	Madera	unknown
9001-JG8-021D	propargite	121	41	21	7/12/1990	Madera	unknown
9001-JG8-021E	phosmet	191	38	21	7/12/1990	Madera	unknown
9001-JG8-021E	propargite	88.7	38	21	7/12/1990	Madera	unknown
9001-JG8-028A	phosmet	99.5	40	28	7/12/1990	Madera	unknown
9001-JG8-028A	propargite	13.45	40	28	7/12/1990	Madera	unknown
9001-JG8-028B	phosmet	88.8	40	28	7/12/1990	Madera	unknown
9001-JG8-028B	propargite	13.84	40	28	7/12/1990	Madera	unknown
9001-JG8-028C	phosmet	113	40	28	7/12/1990	Madera	unknown
9001-JG8-028C	propargite	12.9	40	28	7/12/1990	Madera	unknown
9001-JG8-028D	phosmet	76.6	40	28	7/12/1990	Madera	unknown
9001-JG8-028D	propargite	11.3	40	28	7/12/1990	Madera	unknown
9001-JG8-035A	phosmet	87.5	39	35	7/12/1990	Madera	unknown
9001-JG8-035A	propargite	ND (5)	39	35	7/12/1990	Madera	unknown
9001-JG8-035B	phosmet	76.8	40	35	7/12/1990	Madera	unknown
9001-JG8-035B	propargite	ND (5)	40	35	7/12/1990	Madera	unknown
9001-JG8-035C	phosmet	60.4	39	35	7/12/1990	Madera	unknown
9001-JG8-035C	propargite	ND (5)	39	35	7/12/1990	Madera	unknown
9001-JG8-035D	phosmet	60.3	40	35	7/12/1990	Madera	unknown
9001-JG8-035D	propargite	ND (5)	40	35	7/12/1990	Madera	unknown
9001-JG8-035E	phosmet	239	37	35	7/12/1990	Madera	unknown
9001-JG8-035E	propargite	92.8	37	35	7/12/1990	Madera	unknown
9001-JG9-000A	methomyl	1.6	39	Pre-application	8/14/1990	Fresno	0.9
9001-JG9-000B	methomyl	3.2	41	Pre-application	8/14/1990	Fresno	0.9
9001-JG9-000C	methomyl	3.2	40	Pre-application	8/14/1990	Fresno	0.9

1 Where MDL is specified, ½ MDL was used to calculate sample DFR

2 Samples excluded from analysis were Days = "Pre-Application" and when µg = "ND" for all samples, by analyte, within sampling interval (shaded rows).

Appendix to HS-1810, A Study of Dislodgeable Foliar Residues (DFR) of Methomyl, Phosmet and Propargite on Grapes in Fresno, Kern and Madera Counties, 1990

Table 1. Raw Data for Study Samples (ai = active ingredient, MDL = Minimum Detection Limit, ND = Not Detected, U = Unknown)

WHS Sample #	Analyte	μg	# leaf discs	Days	Date Applied	County	lb/acre ai
9001-JG9-000D	methomyl	3.7	40	Pre-application	8/14/1990	Fresno	0.9
9001-JG9-000E	methomyl	2.2	24	Pre-application	8/14/1990	Fresno	0.9
9001-JG9-002A	methomyl	195.5	40	2	8/14/1990	Fresno	0.9
9001-JG9-002B	methomyl	158.8	41	2	8/14/1990	Fresno	0.9
9001-JG9-002C	methomyl	181.2	40	2	8/14/1990	Fresno	0.9
9001-JG9-002D	methomyl	143.3	42	2	8/14/1990	Fresno	0.9
9001-JG9-002E	methomyl	62.0	23	2	8/14/1990	Fresno	0.9
9001-JG9-009A	methomyl	43.0	40	8	8/14/1990	Fresno	0.9
9001-JG9-009B	methomyl	56.46	40	8	8/14/1990	Fresno	0.9
9001-JG9-009C	methomyl	31.39	40	8	8/14/1990	Fresno	0.9
9001-JG9-009D	methomyl	55.85	40	8	8/14/1990	Fresno	0.9
9001-JG9-009E	methomyl	35.46	24	8	8/14/1990	Fresno	0.9
9001-JG9-024E	methomyl	7.5	27	23	8/14/1990	Fresno	0.9
9001-JG9-16A	methomyl	13.9	40	15	8/14/1990	Fresno	0.9
9001-JG9-16B	methomyl	13.3	40	15	8/14/1990	Fresno	0.9
9001-JG9-16C	methomyl	19.7	40	15	8/14/1990	Fresno	0.9
9001-JG9-16D	methomyl	36.7	40	15	8/14/1990	Fresno	0.9
9001-JG9-16E	methomyl	8.4	24	15	8/14/1990	Fresno	0.9
9001-JG9-24A	methomyl	23.8	40	23	8/14/1990	Fresno	0.9
9001-JG9-24B	methomyl	13.0	39	23	8/14/1990	Fresno	0.9
9001-JG9-24C	methomyl	5.05	40	23	8/14/1990	Fresno	0.9
9001-JG9-24D	methomyl	21.4	40	23	8/14/1990	Fresno	0.9
9001-MV1-000A	propargite	ND	40	Pre-application	7/28/1990	Madera	unknown
9001-MV1-000B	propargite	ND	40	Pre-application	7/28/1990	Madera	unknown
9001-MV1-000C	propargite	ND	40	Pre-application	7/28/1990	Madera	unknown
9001-MV1-000D	propargite	ND	40	Pre-application	7/28/1990	Madera	unknown
9001-MV1-000E	propargite	ND	40	Pre-application	7/28/1990	Madera	unknown
9001-MV1-004A	propargite	870	41	2	7/28/1990	Madera	unknown
9001-MV1-004B	propargite	778	40	2	7/28/1990	Madera	unknown
9001-MV1-004C	propargite	442	40	2	7/28/1990	Madera	unknown
9001-MV1-004E	propargite	563	39	2	7/28/1990	Madera	unknown
9001-MV1-012A	propargite	222	40	12	7/28/1990	Madera	unknown
9001-MV1-012B	propargite	267	39	12	7/28/1990	Madera	unknown
9001-MV1-012C	propargite	88.9	39	12	7/28/1990	Madera	unknown
9001-MV1-012D	propargite	244	39	12	7/28/1990	Madera	unknown
9001-MV1-012E	propargite	238	41	12	7/28/1990	Madera	unknown
9001-MV1-019A	propargite	140.2	38	19	7/28/1990	Madera	unknown

1 Where MDL is specified, $\frac{1}{2}$ MDL was used to calculate sample DFR

2 Samples excluded from analysis were Days = "Pre-Application" and when μg = "ND" for all samples, by analyte, within sampling interval (shaded rows).

Appendix to HS-1810, A Study of Dislodgeable Foliar Residues (DFR) of Methomyl, Phosmet and Propargite on Grapes in Fresno, Kern and Madera Counties, 1990

Table 1. Raw Data for Study Samples (ai = active ingredient, MDL = Minimum Detection Limit, ND = Not Detected, U = Unknown)

WHS Sample #	Analyte	µg	# leaf discs	Days	Date Applied	County	lb/acre ai
9001-MV1-019C	propargite	40.19	41	19	7/28/1990	Madera	unknown
9001-MV1-025A	propargite	59.3	40	25	7/28/1990	Madera	unknown
9001-MV1-025B	propargite	35.5	40	25	7/28/1990	Madera	unknown
9001-MV1-025C	propargite	15	40	25	7/28/1990	Madera	unknown
9001-MV1-025D	propargite	62.5	39	25	7/28/1990	Madera	unknown
9001-MV1-025E	propargite	43	38	25	7/28/1990	Madera	unknown
9001-MV2-000A	propargite	ND	40	Pre-application	7/27/1990	Madera	unknown
9001-MV2-000B	propargite	ND	41	Pre-application	7/27/1990	Madera	unknown
9001-MV2-000C	propargite	ND	36	Pre-application	7/27/1990	Madera	unknown
9001-MV2-000D	propargite	ND	40	Pre-application	7/27/1990	Madera	unknown
9001-MV2-000E	propargite	ND	40.5	Pre-application	7/27/1990	Madera	unknown
9001-MV2-004A	propargite	2700	40	3	7/27/1990	Madera	unknown
9001-MV2-004C	propargite	300	39	3	7/27/1990	Madera	unknown
9001-MV2-004E	propargite	2664	40	3	7/27/1990	Madera	unknown
9001-MV2-013A	propargite	278	39	13	7/27/1990	Madera	unknown
9001-MV2-013B	propargite	814	39	13	7/27/1990	Madera	unknown
9001-MV2-013C	propargite	128	40	13	7/27/1990	Madera	unknown
9001-MV2-013D	propargite	88.8	40	13	7/27/1990	Madera	unknown
9001-MV2-013E	propargite	283	40	13	7/27/1990	Madera	unknown
9001-MV2-020A	propargite	323	39	20	7/27/1990	Madera	unknown
9001-MV2-020E	propargite	733	40	20	7/27/1990	Madera	unknown
9001-MV2-026A	propargite	157	39	26	7/27/1990	Madera	unknown
9001-MV2-026B	propargite	58.9	40	26	7/27/1990	Madera	unknown
9001-MV2-026C	propargite	17.5	40	26	7/27/1990	Madera	unknown
9001-MV2-026D	propargite	50.1	39	26	7/27/1990	Madera	unknown
9001-MV2-026E	propargite	273	40	26	7/27/1990	Madera	unknown

1 Where MDL is specified, $\frac{1}{2}$ MDL was used to calculate sample DFR

2 Samples excluded from analysis were Days = "Pre-Application" and when µg = "ND" for all samples, by analyte, within sampling interval (shaded rows).